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(54) Title: PROBES USED FOR GENETIC PROFILING (57) Abstract <p>There is considerable evidence that significant factor underlying the individual variability in response to disease, therapy and prognosis lies in a person's genetic make-up. There have been numerous examples relating that polymorphisms within a given gene can alter the functionality of the protein encoded by that gene thus leading to a variable physiological response. In order to bring about the integration of genomics into medical practice and enable design and building of a technology platform which will enable the everyday practice of molecular medicine a way must be invented for the DNA sequence data to be aligned with the identification of genes central to the induction, development, progression and outcome of disease or physiological states of interest. According to the invention, the number of genes and their configurations (mutations and polymorphisms) needed to be identified in order to provide critical clinical information concerning individual prognosis is considerably less than the 100,000 thought to comprise the human genome. The identification of the identity of the core group of genes enables the invention of a design for genetic profiling technologies.</p>		

CLAIMS

1. A set of nucleotide probes for detecting relevant variants (mutations and polymorphisms), e.g. nucleotide substitutions (missense, nonsense, splicing and regulatory), small deletions, small insertions, small insertion deletions, gross insertions, gross deletions, duplications, complex rearrangements and repeat variations in a target group of genes; said probes being complementary to DNA and RNA sequences of said group of genes; characterised in that said group is a core group of genes consisting of substantially all of the following:

KEY TO 'PROTEIN FUNCTION' COLUMN

E ENZYME
 T TRANSPORT & STORAGE
 S STRUCTURAL
 I IMMUNITY
 N NERVOUS TRANSMISSION
 G GROWTH & DIFFERENTIATION

CORE GENE LIST

CORE GENE LIST	HUGO GENE SYMBOL	PROTEIN FUNCTION
11beta hydroxysteroid dehydrogenase 2	HSD11B2	E
17beta hydroxysteroid dehydrogenase 1	HSD17B1	E
17beta hydroxysteroid dehydrogenase 3	HSD17B3	E
17beta hydroxysteroid dehydrogenase 4	HSD17B4	E
17beta hydroxysteroid oxidoreductase		E
18-hydroxysteroid oxidoreductase		E
2,3-bisphosphoglycerate mutase	BPGM	E
2,4-dienoyl CoA reductase	DECR	E
3 beta hydroxysteroid dehydrogenase 2	HSD3B2	E
3-oxoacid CoA transferase	OXCT	E
4-hydroxyphenylpyruvate dioxygenase	HPD	E
5,10-methylenetetrahydrofolate reductase (NADPH)	MTHFR	E
5-adenosyl homocysteine hydrolase		E
6-phosphofructo-2-kinase	PFKFB1	E
6-pyruvoyltetrahydropterin synthase	PTS	E
Acetoacetyl 1-CoA-thiolase	ACAT1	E
Acetoacetyl 2-CoA-thiolase	ACAT2	E
Acetyl CoA acyltransferase	ACAA	E
Acetyl CoA carboxylase	ACC	E
Acetyl CoA carboxylase alpha	ACACA	E
Acetyl CoA synthase		E
Acetylcholinesterase	ACHE	E
Acid phosphatase 2, lysosomal	ACP2	E
Aconitase		E
Acyl CoA dehydrogenase, long chain	ACADL	E
Acyl CoA dehydrogenase, medium chain	ACADM	E
Acyl CoA dehydrogenase, short chain	ACADS	E
Acyl CoA dehydrogenase, very long chain	ACADVL	E
Acyl CoA synthetase, long chain, 1	LACS1	E

Acyl CoA synthetase, long chain, 2	LACS2	E
Acyl CoA synthetase, long chain, 4	ACS4	E
Acyl malonyl condensing enzyme		E
Acyl-CoA thioesterase		E
ADAM (A disintegrin and metalloproteinase) 1	ADAM1	E
ADAM (A disintegrin and metalloproteinase) 10	ADAM10	E
ADAM (A disintegrin and metalloproteinase) 11	ADAM11	E
ADAM (A disintegrin and metalloproteinase) 12	ADAM12	E
ADAM (A disintegrin and metalloproteinase) 13	ADAM13	E
ADAM (A disintegrin and metalloproteinase) 14	ADAM14	E
ADAM (A disintegrin and metalloproteinase) 15	ADAM15	E
ADAM (A disintegrin and metalloproteinase) 16	ADAM16	E
ADAM (A disintegrin and metalloproteinase) 17	ADAM17	E
ADAM (A disintegrin and metalloproteinase) 18	ADAM18	E
ADAM (A disintegrin and metalloproteinase) 19	ADAM19	E
ADAM (A disintegrin and metalloproteinase) 2	ADAM2	E
ADAM (A disintegrin and metalloproteinase) 3A	ADAM3A	E
ADAM (A disintegrin and metalloproteinase) 3B	ADAM3B	E
ADAM (A disintegrin and metalloproteinase) 4	ADAM4	E
ADAM (A disintegrin and metalloproteinase) 5	ADAM5	E
ADAM (A disintegrin and metalloproteinase) 6	ADAM6	E
ADAM (A disintegrin and metalloproteinase) 7	ADAM7	E
ADAM (A disintegrin and metalloproteinase) 8	ADAM8	E
ADAM (A disintegrin and metalloproteinase) 9	ADAM9	E
Adenosine deaminase	ADA	E
Adenosine monophosphate deaminase	AMPD	E
Adenylate cyclase 1	ADCY1	E
Adenylate cyclase 2	ADCY2	E
Adenylate cyclase 3	ADCY3	E
Adenylate cyclase 4	ADCY4	E
Adenylate cyclase 5	ADCY5	E
Adenylate cyclase 6	ADCY6	E
Adenylate cyclase 7	ADCY7	E
Adenylate cyclase 8	ADCY8	E
Adenylate cyclase 9	ADCY9	E
Adenylate kinase	AK1	E
Adenylate transferase		E
Adenylosuccinate lyase	ADSL	E
ADP-ribosyltransferase	ADPRT	E
Adrenoleukodystrophy gene	ALD	E
Alanine-glyoxylate aminotransferase	AGXT	E
Alcohol dehydrogenase 1	ADH1	E
Alcohol dehydrogenase 2	ADH2	E
Alcohol dehydrogenase 3	ADH3	E
Alcohol dehydrogenase 4	ADH4	E
Alcohol dehydrogenase 5	ADH5	E
Alcohol dehydrogenase 6	ADH6	E
Alcohol dehydrogenase 7	ADH7	E
Aldehyde dehydrogenase 1	ALDH1	E
Aldehyde dehydrogenase 10	ALDH10	E

Aldehyde dehydrogenase 2	ALDH2	E
Aldehyde dehydrogenase 5	ALDH5	E
Aldehyde dehydrogenase 6	ALDH6	E
Aldehyde dehydrogenase 7	ALDH7	E
Aldolase A	ALDOA	E
Aldolase B	ALDOB	E
Aldolase C	ALDOC	E
Alkylglycerone phosphate synthase	AGPS	E
alpha1-antichymotrypsin	AACT	E
alpha1-antitrypsin	PI	E
alpha2-antiplasmin	PLI	E
alpha-amino adipic semialdehyde synthase		E
alpha-amylase		E
alpha-dextrinase		E
alpha-Galactosidase A	GLA	E
Alpha-galactosidase B, GALB	NAGA	E
alpha-glucosidase, neutral C	GANC	E
alpha-glucosidase, neutral AB	GANAB	E
Peptidylglycine alpha-amidating monooxygenase	PAM	E
alpha-ketoglutarate dehydrogenase		E
alpha-L-Iduronidase	IDUA	E
Aminomethyltransferase	AMT	E
Aminopeptidase P	XPNPEP2	E
Amylo-1,6-glucosidase	AGL	E
Angiotensin converting enzyme	ACE, DCP1	E
Angiotensinogen	AGT	E
Antithrombin III	AT3	E
Apurinic endonuclease	APE	E
Arginase	ARG1	E
Arginosuccinate lyase	ASL	E
Arginosuccinate synthetase	ASS	E
Arylsulfatase A	ARSA	E
Arylsulfatase B	ARSB	E
Arylsulfatase C	ARSC1	E
Arylsulfatase D	ARSD	E
Arylsulfatase E	ARSE	E
Arylsulfatase F	ARSF	E
Asparagine synthetase	AS	E
Aspartate transcarbamoylase		E
Aspartoacylase	ASPA	E
Aspartylglucosaminidase	AGA	E
ATP cobalamin adenosyltransferase		E
ATP sulphurylase	atpsk2	E
ATP/ADP translocase		E
beta-galactosidase	GLB1	E
beta-glucosidase, neutral		E
beta-Glucuronidase	GUSB	E
beta-ketoacyl reductase		E
beta-N-acetylhexosaminidase, A		E
beta-N-acetylhexosaminidase, B		E

Bile acid coenzyme A: amino acid N-acyltransferase	BAAT	E
Bile salt-stimulated lipase	CEL	E
Bilirubin UDP-glucuronosyltransferase		E
Biotinidase	BTD	E
Bleomycin hydrolase	BLMH	E
Branched chain aminotransferase 1, cytosolic	BCAT1	E
Branched chain aminotransferase 2, mitochondrial	BCAT2	E
Branched chain keto acid dehydrogenase E1, alpha polypeptide	BCKDHA	E
Branched chain keto acid dehydrogenase E1, beta polypeptide	BCKDHB	E
Brush border guanylyl cyclase		E
Butyrylcholinesterase	BCHE	E
C1 inhibitor		E
C17-20 desmolase		E
C3 convertase		E
Calpain	CAPN, CAPN3	E
Carbamoylphosphate synthetase 1	CPS1	E
Carbamoylphosphate synthetase 2	CPS2	E
Carbonic anhydrase, alpha	CA1	E
Carbonic anhydrase, beta	CA2	E
Carbonic anhydrase 3	CA3	E
Carbonic anhydrase 4	CA4	E
Carboxylesterase 1	CES1	E
Carboxypeptidase	CPN	E
Carnitine acetyltransferase	CRAT	E
Carnitine acylcarnitine translocase	CACT	E
Carnitine palmitoyltransferase I	CPT1A	E
Carnitine palmitoyltransferase II	CPT2	E
Catechol-O-methyltransferase	COMT	E
Cathepsin B		E
Cathepsin D		E
Cathepsin E		E
Cathepsin G	CTSG	E
Cathepsin H		E
Cathepsin K	CTSK	E
Cathepsin L		E
Cathepsin S		E
Caveolin 3	CAV3	E
Ceruloplasmin precursor	CP	E
Chitotriosidase	chit	E
Cholesterol ester hydroxylase		E
Choline acetyltransferase	CHAT	E
Chymase	CHY1	
Chymotrypsinogen		E
Citrate synthase		E
CoA transferase		E
Coenzyme Q (CoQ)/ubiquinone		E
Collagenic-like tail subunit of asymmetric	COLQ	E

acetylcholinesterase		
Complex I		E
Complex II		E
Complex III		E
Complex III		E
Complex V	MTATP6	E
Coproporphyrinogen oxidase	CPO	E
Creatine kinase - B and m	CKBE	E
Cu ²⁺ transporting ATPase alpha polypeptide	ATP7A	E
Cu ²⁺ transporting ATPase beta polypeptide	ATP7B	E
Cyclic nucleotide phosphodiesterase 1B	PDE1B	E
Cyclic nucleotide phosphodiesterase 1B1	PDE1B1	E
Cyclic nucleotide phosphodiesterase 2A3	PDE2A3	E
Cyclic nucleotide phosphodiesterase 3A	PDE3A	E
Cyclic nucleotide phosphodiesterase 3B	PDE3B	E
Cyclic nucleotide phosphodiesterase 4A	PDE4A	E
Cyclic nucleotide phosphodiesterase 4C	PDE4C	E
Cyclic nucleotide phosphodiesterase 5A	PDE5A	E
Cyclic nucleotide phosphodiesterase 6A	PDE6A	E
Cyclic nucleotide phosphodiesterase 6B	PDE6B	E
Cyclic nucleotide phosphodiesterase 7	PDE7	E
Cyclic nucleotide phosphodiesterase 8	PDE8	E
Cyclic nucleotide phosphodiesterase 9A	PDE9A	E
Cyclooxygenase 1	COX1	E
Cyclooxygenase 2	COX2	E
CYP11A1	CYP11A1	E
CYP11B1	CYP11B1	E
CYP11B2	CYP11B2	E
CYP17	CYP17	E
CYP19	CYP19	E
CYP1A1	CYP1A1	E
CYP1A2	CYP1A2	E
CYP1B1	CYP1B1	E
CYP21	CYP21	E
CYP24	CYP24	E
CYP27	CYP27	E
CYP27B1	PDDR	E
CYP2A1	CYP2A1	E
CYP2A13	CYP2A13	E
CYP2A3	CYP2A3	E
CYP2A6V2	CYP2A6V2	E
CYP2A7	CYP2A7	E
CYP2B6	CYP2B6	E
CYP2C18	CYP2C18	E
CYP2C19	CYP2C19	E
CYP2C8	CYP2C8	E
CYP2C9	CYP2C9	E
CYP2D6	CYP2D6	E
CYP2E1	CYP2E1	E
CYP2F1	CYP2F1	E

CYP2J2	CYP2J2	E
CYP3A3	CYP3A3	E
CYP3A4	CYP3A4	E
CYP3A5	CYP3A5	E
CYP3A7	CYP3A7	E
CYP4A11	CYP4A11	E
CYP4B1	CYP4B1	E
CYP4F2	CYP4F2	E
CYP4F3	CYP4F3	E
CYP51	CYP51	E
CYP5A1	CYP5A1	E
CYP7A	CYP7A	E
CYP8	CYP8	E
Cystathionase	CTH	E
Cystathione beta synthase	CBS	E
Cytidine deaminase	CDA	E
Cytidine-5-prime-triphosphate synthetase	CTPS	E
Cytochrome a		E
Cytochrome b-245 alpha	CYBA	E
Cytochrome b-245 beta	CYBB	E
Cytochrome b-5	CYB5	E
Cytochrome c		E
Cytochrome c oxidase, MTCO		E
D-beta-hydroxybutyrate dehydrogenase		E
Dehydratase		E
Delta 4-5 alpha-reductase		E
Delta 4-5 oxosteroid isomerase		E
Delta aminolevulinate dehydratase	ALAD	E
Delta aminolevulinate synthase 1	ALAS1	E
Delta aminolevulinate synthase 2	ALAS2	E
Delta(4)-3-oxosteroid 5-beta-reductase		E
Delta-7-dehydrocholesterol reductase	DHCR7	E
Deoxycorticosterone (DOC) receptor		E
Deoxycytidine kinase DCK		E
Deoxyuridine triphosphatase; dUTPase		E
DHEA sulfotransferase	STD	E
Dihydrodiol dehydrogenase 1	DDH1	E
Dihydrofolate reductase	DHFR	E
Dihydrolipoyl dehydrogenase		E
Dihydrolipoyl dehydrogenase 2	PDHA	E
Dihydrolipoyl succinyltransferase	DLST	E
Dihydrolipoyl transacetylase	PDHA	E
Dihydroorotase		E
Dihydropyrimidinase	DPYS	E
Dihydroxyacetonephosphate acyltransferase	DHAPAT	E
Dihydropyrimidine dehydrogenase	DPYD	E
DM-Kinase	DMPK	E
DNA directed polymerase, alpha	POLA	E
DNA glycosylases		E
DNA helicases		E

DNA Ligase 1	LIG1	E
DNA methyltransferase	DNMT	E
Methylguanine-DNA methyltransferase	MGMT	E
DNA polymerase 1		E
DNA polymerase 2		E
DNA polymerase 3		E
DNA primase		E
DNA-dependant RNA polymerase		E
DOPA decarboxylase	DDC	E
Dopamine beta hydroxylase	DBH	E
Dysferlin	DYS, DYSF	E
Dystrophia myotonica	DM, DMPK	E
Dystrophia myotonica, atypical	DM2	E
Elastase 1	ELAS1	E
Elastase 2	ELAS2	E
Electron-transferring flavoprotein dehydrogenase	ETFDH	E
Enolase	ENO1	E
Enoyl CoA hydratase		E
Enoyl CoA isomerase		E
Enoyl CoA reductase		E
Enterokinase	PRSS7, ENTK	E
Eosinophil peroxidase	EPX	E
Epilepsy, benign neonatal 4 gene	ICCA	E
Epilepsy, female restricted	EFMR	E
Epilepsy, progressive myoclonic 2 gene	EPM2A	E
Epoxide hydrolase 1, microsomal	EPHX1	E
Excision repair complementation group 1 protein	ERCC1	E
Excision repair complementation group 2 protein	ERCC2	E
Excision repair complementation group 2 protein	ERCC3	E
Excision repair complementation group 4 protein	ERCC4	E
Excision repair complementation group 6 protein	ERCC6	E
FADH dehydrogenase		E
Ferrochelatase	FECH	E
Flavin-containing monooxygenase 1	FMO1	E
Flavin-containing monooxygenase 2	FMO2	E
Flavin-containing monooxygenase 3	FMO3	E
Flavin-containing monooxygenase 4	FMO4	E
Formiminotransferase		E
Fructose-1,6-diphosphatase	FBP1	E
Fucosidase alpha-L-1	FUCA1	E
Fucosidase alpha-L-2		E
Fumarase	FH	E
Fumarylacetoacetase	FAH	E
GABA transaminase	ABAT	E
Gadd45 (growth arrest & DNA-damage-inducible protein)		E
Galactocerebrosidase	GALC	E
Galactokinase	GALK1	E
Galactose 1-phosphate uridyl-transferase	GALT	E
Gastric Intrinsic factor, GIF	GIF	E
Glucokinase	GCK	E

Glucosaminyl (N-acetyl) transferase 2, I-branching enzyme	GCNT2	E
Glucose-6-phosphatase	G6PC	E
Glucose-6-phosphatase translocase	G6PT1	E
Glucose-6-phosphate dehydrogenase	G6PD	E
Glucosidase, acid alpha	GAA	E
Glucosidase, acid beta	GBA	E
Glutamate decarboxylase, GAD	GAD1	E
Glutamate dehydrogenase	GLUD1	E
Glutamate-cysteine ligase	GLCLC	E
Glutamine phosphoribosylpyrophosphate amidotransferase/PRPP amidotransferase		E
Glutamine synthase		E
Glutaryl-CoA dehydrogenase	GCDH	E
Glutathione peroxidase, GPX1	GPX1	E
Glutathione peroxidase, GPX2	GPX2	E
Glutathione reductase, GSR	GSR	E
Glutathione S-transferase mu 1, GSTM1	GSTM1	E
Glutathione S-transferase mu 4, GSTM4		E
Glutathione S-transferase theta 1, GSTT1	GSTT1	E
Glutathione S-transferase theta 2, GSTT2		E
Glutathione S-transferase, GSTP1	GSTP1	E
Glutathione S-transferase, GSTZ1	GSTZ1	E
Glutathione synthetase	GSS	E
Glyceraldehyde-3-phosphate dehydrogenase, GAPDH	GAPDH	E
Glycerol kinase	GK	E
Glycerophosphate dehydrogenase 2	GPD2	E
Glycinamide ribonucleotide (GAR) transformylase	GART	E
Glycine dehydrogenase	GLDC	E
Glycogen branching enzyme	GBE1	E
Glycogen phosphorylase	PYGL	E
Glycogen synthase 1 (muscle)	GLYS1	E
Glycogen synthase 2 (liver)	GYS2	E
Glycosyltransferases, ABO blood group	ABO	E
GM2 ganglioside activator protein, GM2A	GM2A	E
Guanidinoacetate N-methyltransferase	GAMT	E
Guanylate cyclase 2D, membrane (retina-specific)	GUCY2D	E
Guanylate cyclase activator 1A (retina)	GUCA1A	E
Guanylate kinase		E
Guanylyl cyclase		E
Haeme regulated inhibitor kinase		E
Heparan sulfamidase		E
Hepatic lipase	LIPC	E
Hepatic nuclear factor-3-beta	HNF3B	E
Hepatic nuclear factor-4-alpha	HNF4A	E
Hexokinase 1	HK1	E
Hexokinase 2	HK2	E
Hexosaminidase A	HEXA,TSD	E
Hexosaminidase B	HEXB	E

Histidase		E
HMG-CoA lyase	HMGCL	E
HMG-CoA reductase	HMGCR	E
HMG-CoA synthase	HMGCS2	E
Holocarboxylase synthetase	HLCS	E
Homogentisate 1,2 dioxygenase	HGD	E
Hormone-sensitive lipase	HSL	E
HSSB, replication protein		E
Hydroxyacyl glutathione hydrolase	HAGH	E
Hypoxanthine-guanine phosphoribosyltransferase, HGPRT	HPRT	E
Hypoxia inducible factor 1	HIF1A	E
Hypoxia inducible factor 2		E
Ibonucleoside diphosphate reductase		E
Iduronate 2 sulphatase	IDS	E
Inosine monophosphate dehydrogenase, IMPDH		E
Inosine triphosphatase	ITPA	E
Inter-alpha-trypsin inhibitor, IATI		E
Iodothyronine-5'-deiodinase, type 1 and 2		E
IP3 kinase		E
Isocitrate dehydrogenase		E
Isovaleric acid CoA dehydrogenase	IVD	E
Ketohexokinase	KHK	E
ketolase		E
Kynurenine hydroxylase		E
Kynureninase		E
Lactase		E
Lactate dehydrogenase, A	LDHA	E
Lactate dehydrogenase, B	LDHB	E
Lecithin-cholesterol acyltransferase	LCAT	E
Leukotriene A4 synthase	LTA4S	E
Leukotriene B4 synthase	LTB4S	E
Leukotriene C4 synthase	LTC4S	E
Lipoamide dehydrogenase	OGDH	E
Lipoxygenase		E
Lowe oculocerbrorenal syndrome gene	OCRL	E
Lysosomal acid lipase	LIPA	E
Lysyl hydroxylase	PLOD	E
Lysyl oxidase	LOX	E
Malate dehydrogenase, mitochondrial	MDH2	E
Malonyl CoA decarboxylase		E
Malonyl CoA transferase		E
Maltase-glucoamylase		E
Mannosidase, alpha B lysosomal	MANB	E
Mannosidase, beta A lysosomal	MANBA	E
Matrix metalloproteinase 1	MMP1	E
Matrix metalloproteinase 10	MMP10	E
Matrix metalloproteinase 11	MMP11	E
Matrix metalloproteinase 12	MMP12	E
Matrix metalloproteinase 13	MMP13	E

Matrix metalloproteinase 14	MMP14	E
Matrix metalloproteinase 15	MMP15	E
Matrix metalloproteinase 16	MMP16	E
Matrix metalloproteinase 17	MMP17	E
Matrix metalloproteinase 18	MMP18	E
Matrix metalloproteinase 19	MMP19	E
Matrix metalloproteinase 2	MMP2	E
Matrix metalloproteinase 3	MMP3, STMY1	E
Matrix metalloproteinase 4	MMP4	E
Matrix metalloproteinase 5	MMP5	E
Matrix metalloproteinase 6	MMP6	E
Matrix metalloproteinase 7	MMP7	E
Matrix metalloproteinase 8	MMP8	E
Matrix metalloproteinase 9	MMP9	E
MEK kinase, MEKK		E
Methionine adenosyltransferase	MAT1A, MAT2A	E
Methionine synthase	MTR	E
Methionine synthase reductase	MTRR	E
Methylmalonyl-CoA mutase	MUT	E
Mevalonate kinase	MVK	E
Mitochondrial trifunctional protein, alpha subunit	HADHA	E
Mitochondrial trifunctional protein, beta subunit	HADHB	E
Molybdenum cofactor synthesis 1	MOCS1	E
Molybdenum cofactor synthesis 2	MOCS2	E
Monoamine oxidase A	MAOA	E
Monoamine oxidase B	MAOB	E
Mucopolidoses	GNPTA	E
Muscle phosphorylase	PYGM	E
N-acetylgalactosamine-6-sulfate sulfatase	GALNS	E
N-acetylglucosamine-6-sulfatase	GNS	E
N-acetylglucosaminidase, alpha	NAGLU	E
N-acetyltransferase 1	NAT1	E
N-acetyltransferase 2	NAT2	E
NADH dehydrogenase		E
NADH dehydrogenase (ubiquinone) Fe-S protein 1	NDUFS1	E
NADH dehydrogenase (ubiquinone) Fe-S protein 4	NDUFS4	E
NADH dehydrogenase (ubiquinone) flavoprotein 1	NDUFV1	E
NADH-cytochrome b5 reductase	DIA1	E
NADPH-dependent cytochrome P450 reductase	POR	E
Neuroendocrine convertase 1	NEC1, PCSK1	E
Neutral endopeptidase		E
Nitric oxide synthase 1, NOS1	NOS1	E
Nitric oxide synthase 2, NOS2	NOS2	E
Nitric oxide synthase 3, NOS3	NOS3	E
Nucleoside diphosphate kinase-A	NDPKA	E
Ornithine delta-aminotransferase	OAT	E
Ornithine transcarbamoylase	OTC, NME1	E
Pancreatic amylase		E
Pancreatic lipase	PNLIP	E
Pancreatic lipase related protein 1	PLRP1	E

Pancreatic lipase related protein 2	PLRP2	E
Paraoxonase PON1	PON1	E
Paraoxonase PON2	PON2	E
Paraoxonase PON3		E
PCNA (proliferating cell nuclear antigen)		E
Pepsinogen		E
Peroxidase, salivary	SAPX	E
Phenylalanine hydroxylase	PAH	E
Phenylalanine monooxygenase		E
Phenylethanolamine N-methyltransferase, PNMT	PNMT	E
Phosphoenolpyruvate carboxykinase	PCK1	E
Phosphofructokinase, liver	PFKL	E
Phosphofructokinase, muscle	PFKM	E
Phosphoglucomutase		E
Phosphoglucose isomerase	GPI	E
Phosphoglycerate kinase 1	PGK1	E
Phosphoglycerate mutase 2	PGAM2	E
Phosphoribosyl pyrophosphate synthetase	PRPS1	E
Phosphorylase kinase deficiency, liver	PHK	E
Phosphorylase kinase, alpha 1 (muscle)	PHKA1	E
Phosphorylase kinase, alpha 2	PHKA2	E
Phosphorylase kinase, beta	PHKB	E
Phosphorylase kinase, delta		E
Phosphorylase kinase, gamma 2	PHKG2	E
Pineolytic beta-receptors		E
Plasminogen	PLG	E
Plasminogen activator inhibitor 1	PAI1	E
Plasminogen activator inhibitor 2	PAI2	E
Plasminogen activator receptor, Urokinase	UPAR; PLAUR	S
Plasminogen activator, Tissue	PLAT; TPA	E
Plasminogen activator, Urokinase	UPA; PLAU	E
Poly (ADP-ribose) synthetase	PARS	E
Porphobilinogen deaminase	HMBS	E
Procollagen N-protease		E
Procollagen peptidase		E
Proline dehydrogenase	PRODH	E
Prolyl-4-hydroxylase		E
Propionyl-CoA carboxylase, alpha	PCCA	E
Propionyl-CoA carboxylase, beta	PCCB	E
Prostasin, PRSS8	PRSS8	E
Protease nexin 2	PN2	E
Protective protein for beta-galactosidase	PPGB	E
Protein kinase A		E
Protein kinase B	PRKB	
Protein kinase C, alpha	PRKCA	E
Protein kinase C, gamma	PRKCG	E
Protein kinase DNA-activated	PRKDC	E
Protein kinase G		E
Protein phosphatase 1, regulatory (inhibitor) subunit	PPP1R3	E

Protein phosphatase 2, regulatory subunit A, beta isoform	PPP2R1B	E
Protoporphyrinogen oxidase	PPOX	E
Pterin-4-alpha-carbinolamine	PCBD	
Purine nucleoside phosphorylase	NP	E
Pyrroline-5-carboxylate synthetase	PYCS	E
Pyruvate carboxylase	PC	E
Pyruvate decarboxylase	PDHA	E
Pyruvate kinase	PKLR	E
Quinoid dihydropteridine reductase	QDPR	E
Renin	REN	E
Replication factor A		E
Replication factor C	RFC2	E
Rhodopsin kinase	RHOK	E
Ribonucleotide reductase, RRM		E
Ribosephosphate pyrophosphokinase		E
Ribosomal protein L13A	RPL13A	G
Ribosomal protein L17	RPL17	G
Ribosomal protein S19	RPS19	E
Ribosomal protein S4, X-linked	RPS4X	E
Ribosomal protein S6 kinase	RPS6KA3	E
Ribosomal protein S9	RPS9	G
S-adenosylmethionine decarboxylase, AMD		E
Serine hydroxymethyltransferase	SHMT	E
Serotonin N-acetyltransferase	SNAT	E
Sorbitol dehydrogenase	SORD	E
Sphingomyelinase	SMPD1	E
Steroid 5 alpha reductase 1	SRD5A1	E
Steroid 5 alpha reductase 2	SRD5A2	E
Steroid sulphatase	STS	E
Succinate dehydrogenase 1	SDH1	E
Succinate dehydrogenase 2	SDH2	E
Succinate thiokinase		E
Succinic semi-aldehyde dehydrogenase	ssadh	E
Succinyl CoA synthase		E
Sucrase		E
Sulfite oxidase	SUOX	E
Superoxide dismutase 1	SOD1	E
Superoxide dismutase 3	SOD3	E
TEK, tyrosine kinase, endothelial	TEK	E
Telomerase protein component		E
Terminal deoxynucleotidyltransferase, TDT		E
Thiolase, peroxisomal		E
Thiopurine S-methyltransferase	TPMT	E
Thymidylate synthase	TYMS	E
Tissue inhibitor of metalloproteinase 1, TIMP1	TIMP1	E
Tissue inhibitor of metalloproteinase 2, TIMP2	TIMP2	E
Tissue inhibitor of metalloproteinase 3, TIMP3	TIMP3	E
Tissue inhibitor of metalloproteinase 4, TIMP4	TIMP4	E
Tissue non-specific alkaline phosphatase TNSAP		E

Topoisomerase I		E
Topoisomerase II		E
Transacylase		E
Transketolase	TKT	E
Transketolase-like 1	TKTL1	E
Triosephosphate isomerase	TPI1	E
Trypsin inhibitor		E
Trypsinogen 1	TRY1	E
Trypsinogen 2	TRY2	E
Tryptophan hydroxylase	TPH	E
Tyrosinase	TYR	E
Tyrosinase-related protein 1	TYRP1	E
Tyrosine aminotransferase	TAT	E
Tyrosine hydroxylase	TH	E
Ubiquitin activating enzyme, E1		E
Ubiquitin protein ligase E3A	UBE3A	E
UDP-glucose pyrophosphorylase		E
UDP-glucuronosyltransferase 1	ugt1d, UGT1	E
UDP-glucuronosyltransferase 2	UGT2	E
Urate oxidase	UOX	E
Ureidopropionase		E
Uridinediphosphate(UDP)-galactose-4-epimerase	GALE	E
Uroporphyrinogen decarboxylase	UROD	E
Uroporphyrinogen III synthase	UROS	E
Xanthine dehydrogenase	XDH	E
Xeroderma pigmentosum, complementation group A	XPA	E
Xeroderma pigmentosum, complementation group B	XPB	E
Xeroderma pigmentosum, complementation group C	XPC	E
Xeroderma pigmentosum, complementation group D		E
Xeroderma pigmentosum, complementation group E		E
Xeroderma pigmentosum, complementation group F	XPF	E
Xeroderma pigmentosum, complementation group G	ERCC5	E
Xylitol dehydrogenase		E
Acidic amino acid transporter		T
Adaptin, beta 3A	ADTB3A	T
Adenine phosphoribosyltransferase	APRT	T
Alanine aminotransferase		T
Albumin, ALB	ALB	T
Aldose reductase		T
Alkaline phosphatase, liver/bone/kidney	ALPL	T
Alpha 1 acid glycoprotein	AAG; AGP	T
Androgen binding protein	ABP	T
Angiotensin receptor 1	AGTR1	T

Angiotensin receptor 2	AGTR2	T
Antidiuretic hormone receptor	ADHR	T
Apolipoprotein (a)	LPA	T
Apolipoprotein A 4	APOA4	T
Apolipoprotein A I	APOA1	T
Apolipoprotein A II	APOA2	T
Apolipoprotein B	APOB	T
Apolipoprotein C1	APOC1	T
Apolipoprotein C2	APOC2	T
Apolipoprotein C3	APOC3	T
Apolipoprotein D	APOD	T
Apolipoprotein E	APOE	T
Apolipoprotein H	APOH	T
Aquaporin 1	AQP1	T
Aquaporin 2	AQP2	T
Aryl hydrocarbon receptor	AHR	T
Aryl hydrocarbon receptor nuclear translocator	ARNT	T
Aspartate transaminase		T
Bestrophin	VMD2	T
Bile salt export pump	BSEP, PFIC2	T
Biliverdin reductase		T
Ca(2+) transporting ATPase, fast twitch	ATP2A1	T
Ca(2+) transporting ATPase, slow twitch	ATP2A2	T
Calcium sensing receptor	CASR	T
Calmodulin dependant kinase		T
Canalicular multispecific organic anion transporter	CMOAT	T
Carnitine transporter protein	CDSP, SCD	T
Chediak-Higashi syndrome 1 gene	CHS1	T
Cholesterol ester transfer protein	CETP	T
Clathrin		T
Cortico-steroid binding protein		T
Corticotrophin-releasing hormone	CRH	T
Corticotrophin-releasing hormone receptor	CRHR1	T
Cubilin	CUBN	T
Cystatin B	CSTB	T
Cystatin C	CST3	T
Cysteine-rich intestinal protein		T
Cystinosis	CTNS	T
Diastrophic dysplasia sulfate transporter	DTD	T
Duffy blood group	FY	T
Electron-transferring-flavoprotein alpha	ETFA	T
Electron-transferring-flavoprotein beta	ETFB	T
Emerin	EMD	T
Enteric lipase		T
Faciogenital dysplasia	FGD1, FGDY	T
Fanconi anemia, complementation group A	FANCA	T
Fanconi anemia, complementation group C	FANCC	T
Fanconi anemia, complementation group D	FANCD	T
Fatty acid binding proteins FABP1		T
Fatty acid binding proteins FABP2	FABP2	T

Fatty acid binding proteins FABP3		T
Fatty acid binding proteins FABP4		T
Fatty acid binding proteins FABP5		T
Fatty acid binding proteins FABP6		T
Ferritin, H subunit		T
Ferritin, L subunit	FTL	T
Fucosyltransferase 2	FUT2	T
Fucosyltransferase 3	FUT3	T
Fucosyltransferase 6	FUT6	T
Furin		T
Gamma-glutamyl carboxylase	GGCX	T
Gamma-glutamyltransferase 1	GGT1	T
Gamma-glutamyltransferase 2	GGT2	T
Gap junction protein alpha 1	GJA1	T
Gap junction protein alpha 3	GJA3	T
Gap junction protein alpha 8	GJA8	T
Gap junction protein beta 1	GJB1	T
Gap junction protein beta 2	GJB2	T
Gap junction protein beta 3	GJB3	T
Gastric inhibitory polypeptide GIP	GIP	T
Gastric inhibitory polypeptide receptor, GIPR	GIPR	T
Gastric lipase, LIPF		T
Gastrin releasing peptide	GRP	T
Gastrin releasing peptide receptor	GRPR	T
Glucagon synthase		T
Glutamine transporter		T
Glutathione	GSH	T
Guanylin	GUCA2	T
Haem oxygenase		T
Haemoglobin alpha 1	HBA1	T
Haemoglobin alpha 2	HBA2	T
Haemoglobin beta	HBB	T
Haemoglobin delta	HBD	T
Haemoglobin epsilon		T
Haemoglobin gamma A	HBG1	T
Haemoglobin gamma B	HBG2	T
Haemoglobin gamma G	HBGG	T
Hemochromatosis	HFE	T
Hermansky-pudlak syndrome gene	HPS	T
Histidine-rich glycoprotein	HRG	T
Huntingtin	HD	T
Hyaluronidase		T
Intestinal alkaline phosphatase IAP		T
Kell blood group precursor	XK, KEL	T
Lactotransferrin	LTF	T
Lipoprotein receptor, Low Density	LDLR	T
Lipoprotein, High Density	HDLDT1	T
Lipoprotein, Intermediate Density		T
Lipoprotein, Low Density 1		T
Lipoprotein, Low Density 2		T

Lipoprotein, Very Low Density	VLDLR	T
Long QT-type 2 potassium channels	LQT2, KCNH2	T
Low density lipoprotein receptor-related protein precursor	LRP	T
Mannosyl (alpha-1,6-)-glycoprotein beta-1, 2-N-acetylglucosaminyltransferase	MGAT2	T
Marenostrin	MEFV	T
Melanocortin 1 receptor	MC1R	T
Melanocortin 2 receptor	MC2R	T
Melanocortin 4 receptor	MC4R	T
Metallothionein		T
Microsomal triglyceride transfer protein	MTP	T
Mucin 18	MUC18	T
Mucin, MUC2		T
Mucin, MUC5AC		T
Mucin, MUC6		T
Mulibrey nanism	MUL	T
Myocilin	MYOC	T
Myoglobin		T
Myopia 1	MYP1	T
Myopia 2	MYP2	T
Na ⁺ /H ⁺ exchanger 1	NHE1	T
Na ⁺ /H ⁺ exchanger 2	NHE2	T
Na ⁺ /H ⁺ exchanger 3	NHE3	T
Na ⁺ /H ⁺ exchanger 4	NHE4	T
Na ⁺ /H ⁺ exchanger 5	NHE5	T
Na ⁺ -coupled glucose/galactose transporter		T
Nephrolithiasis 2	NPHL2	T
Nephronophthisis 1	NPHP1	T
Nephronophthisis 2	NPHP2	T
Nephrosis 1	NPHS1	T
Neuraminidase sialidase	NEU	T
Niemann-Pick disease protein	NPC1	T
Nucleophosmin	NPM1	T
Palmitoyl-protein thioesterase	PPT	T
Pancreatic colipase		T
Pendrin, PDS	PDS	T
Pepsin		T
Peptidases A		T
Peptidases B		T
Peptidases C		T
Peptidases D	PEPD	T
Peptidases E		T
Peptidases S		T
Peroxisomal membrane protein 3	PXMP3	T
Peroxisome biogenesis factor 1	PEX1	T
Peroxisome biogenesis factor 6	PEX6	T
Peroxisome biogenesis factor 7	PEX7	T
Peroxisome biogenesis factor 19	PEX19	T
Peroxisome proliferative activated receptor, alpha	PPARA	T

Peroxisome proliferative activated receptor, gamma	PPARG	T
Peroxisome receptor 1	PXR1	T
P-glycoprotein 1	PGY1	T
P-glycoprotein 3	PGY3	T
Phosphomannomutase-2	PMM2	T
Phosphomannose isomerase-1, PMI1	MPI	T
Plakophilin 1	PKP1	T
Platelet glutaminase	GLS	T
Platelet monamine oxidase		T
Plectin 1	PLEC1	T
Polycystic kidney and hepatic disease 1	PKHD1	T
Polycystin 1	PKD1	T
Polycystin 2	PKD2	T
Polymorphonuclear elastase		T
Preproglucagon		T
Preproinsulin		T
Presenilin 1	PSEN1	T
Presenilin 2	PSEN2	T
Prostaglandin I2 receptor		T
Protease inhibitor 1		T
Renal glutaminase		T
Retinaldehyde binding protein 1	RLBP1	T
Retinol binding protein 1		T
Retinol binding protein 2		T
Retinol binding protein 4	RBP4	T
Rhesus blood group, CcEe antigens	RHCE	T
Rhesus blood group, D antigen	RHD	T
Rhesus blood group-associated glycoprotein	RHAG	T
Salivary amylase, AMY1		T
Secretin	SCT	T
Secretin receptor, SCTR	SCTR	T
Serum amyloid A	SAA	T
Serum amyloid P	SAP	T
Sex hormone binding globulin, SHBG		T
Solute carrier family 1 (amino acid transporter), member 6	SLC1A6	T
Solute carrier family 1 (glial high affinity glutamate transporter), member 3	SLC1A3	T
Solute carrier family 1 (glutamate transporter), member 1	SLC1A1	T
Solute carrier family 1 (glutamate transporter), member 2	SLC1A2	T
Solute carrier family 1 (neutral amino acid transporter), member 4	SLC1A4	T
Solute carrier family 10 (sodium/bile acid cotransporter family), member 1	SLC10A1	T
Solute carrier family 10 (sodium/bile acid cotransporter family), member 2	SLC10A2	T
Solute carrier family 12, member 1	SLC12A1	T
Solute carrier family 12, member 2	SLC12A2	T

Solute carrier family 12, member 3	SLC12A3	T
Solute carrier family 14, member 2	SLC14A2	T
Solute carrier family 15 (H ⁺ /peptide transporter, intestinal), member 1	SLC15A1	T
Solute carrier family 15 (H ⁺ /peptide transporter, kidney), member 2	SLC15A2	T
Solute carrier family 16 (monocarboxylate transporter), member 1	SLC16A1	T
Solute carrier family 16 (monocarboxylate transporter), member 7	SLC16A7	T
Solute carrier family 17, member 1	SLC17A1	T
Solute carrier family 17, member 2	SLC17A2	T
Solute carrier family 18, member 3	SLC18A3	T
Solute carrier family 19 (folate transporter), member 1	SLC19A1	T
Solute carrier family 2 (facilitated glucose transporter), member 1	SLC2A1	T
Solute carrier family 2 (facilitated glucose transporter), member 2	SLC2A2	T
Solute carrier family 2 (facilitated glucose transporter), member 3	SLC2A3	T
Solute carrier family 2 (facilitated glucose transporter), member 4	SLC2A4	T
Solute carrier family 2 (facilitated glucose transporter), member 5	SLC2A5	T
Solute carrier family 20, member 1	SLC20A1	T
Solute carrier family 20, member 2	SLC20A2	T
Solute carrier family 20, member 3	SLC20A3	T
Solute carrier family 21, member 2	SLC21A2	T
Solute carrier family 21, member 3	SLC21A3	T
Solute carrier family 22, member 1	SLC22A1	T
Solute carrier family 22, member 2	SLC22A2	T
Solute carrier family 22, member 5	SLC22A5	T
Solute carrier family 25, member 12	SLC25A12	T
Solute carrier family 3 (facilitated glucose transporter), member 1	SLC3A1	T
Solute carrier family 4 (anion exchanger), member 1	SLC4A1	T
Solute carrier family 4 (anion exchanger), member 2	SLC4A2	T
Solute carrier family 4 (anion exchanger), member 3	SLC4A3	T
Solute carrier family 5 (sodium/glucose transporter), member 1	SLC5A1	T
Solute carrier family 5 (sodium/glucose transporter), member 2	SLC5A2	T
Solute carrier family 5 (sodium/glucose transporter), member 5	SLC5A5	T
Solute carrier family 5, member 3	SLC5A3	T
Solute carrier family 6 (GAMMA-	SLC6A1	T

AMINOBTYRIC ACID transporter), member 1		
Solute carrier family 6 (neurotransmitter transporter, dopamine), member 3	SLC6A3	T
Solute carrier family 6 (neurotransmitter transporter, noradrenaline), member 2	SLC6A2	T
Solute carrier family 6 (neurotransmitter transporter, serotonin), member 4	SLC6A4	T
Solute carrier family 6, member 10	SLC6A10	T
Solute carrier family 6, member 6	SLC6A6	T
Solute carrier family 6, member 8	SLC6A8	T
Solute carrier family 7(amino acid transporter), member 1	SLC7A1	T
Solute carrier family 7(amino acid transporter), member 2	SLC7A2	T
Solute carrier family 7(amino acid transporter), member 7	SLC7A7	T
Solute carrier family 8 (sodium/calcium exchanger), member 1	SLC8A1	T
Sorcin	SRI	T
Steroidogenic acute regulatory protein	STAR	T
Sterol carrier protein 2	SCP2	T
Stratum corneum chymotryptic enzyme		T
Sucrase-isomaltase	SI	T
Surfactant pulmonary-associated protein A1	SFTPA1	T
Surfactant pulmonary-associated protein A2	SFTPA2	T
Surfactant pulmonary-associated protein B	SFTPB	T
Surfactant pulmonary-associated protein C	SFTPC	T
Surfactant pulmonary-associated protein D	SFTPD	T
Survival of motor neuron 1, telomeric	SMN1	T
Tetranectin	TNA	T
Thyroxin-binding globulin	TBG	T
Tocopherol (alpha) transfer protein	TTPA	T
Transcobalamin 1, TCN1		T
Transcobalamin 2, TCN2	TCN2	T
Transthyretin	TTR	T
Trehalase		T
Trypsinogen activation peptide		T
Uncoupling protein 1		T
Uncoupling protein 3	UCP3	T
Uteroglobin	UGB	T
Vitelliform macular dystrophy, atypical gene	VMD1	T
Vitronectin receptor, alpha	VNRA	T
Von Willebrand factor	VWF	T
Achromatopsia 2	ACHM2	S
Actin, alpha, skeletal	ACTA1	S
Actin, alpha, smooth, aortic	ACTA2	S
Actin, alpha, cardiac	ACTC	S
Actin, beta	ACTB	S
Actin, gamma 2	ACTG2	S
Adducin, alpha	ADD1	S

Adducin, beta	ADD2	S
Amelogenin	AMELX	S
Ankyrin 1	ANK1	S
Ankyrin 2	ANK2	S
Ankyrin 3	ANK3	S
Apaf-1		S
Arrestin	SAG	S
Blue cone pigment	BCP	S
Chloride channel 1, skeletal muscle	CLCN1	S
Chloride channel 5	CLCN5	S
Chloride channel KB	CLCNKB	S
Choroideremia gene	CHM	S
Cofilin		S
Collagen I alpha 1	COL1A1	S
Collagen I alpha 2	COL1A2	S
Collagen II alpha 1	COL2A1	S
Collagen III alpha 1	COL3A1	S
Collagen IV alpha 1	COL4A1	S
Collagen IV alpha 2	COL4A2	S
Collagen IV alpha 3	COL4A3	S
Collagen IV alpha 4	COL4A4	S
Collagen IV alpha 5	COL4A5	S
Collagen IV alpha 6	COL4A6	S
Collagen IX alpha 2	COL9A2, EDM2	S
Collagen IX alpha 3	COL9A3	S
Collagen receptor	COLR	S
Collagen V alpha 1	COL5A1	S
Collagen V alpha 2	COL5A2	S
Collagen VI alpha 1	COL6A1	S
Collagen VI alpha 2	COL6A2	S
Collagen VI alpha 3	COL6A3	S
Collagen VII alpha 1	COL7A1	S
Collagen X alpha 1	COL10A1	S
Collagen X alpha 1	COL11A1	S
Collagen XI alpha 2	COL11A2	S
Collagen XVII alpha 1	COL17A1	S
Cryptochrome 1	CRY1	S
Cryptochrome 2	CRY2	S
Crystallin, alpha A	CRYAA	S
Crystallin, alpha B	CRYAB	S
Crystallin, beta B2	CRYBB2	S
Crystallin, gamma A	CRYGA	S
Desmin	DES	S
DNA damage binding protein, DDB1	DDB1	S
DNA damage binding protein, DDB2	DDB2	S
DNA-damage-inducible transcript 3	DDIT3	S
Doublecortin, DCX	DCX	S
Dyskerin	DKC1	S
Dystonia 1	DYT1	S
Dystonia 3	DYT3	S

Dystonia 6	DYT6	S
Dystonia 7	DYT7	S
Dystonia 9	CSE	S
Dystrophin	DMD	S
Dystrophin-associated glycoprotein 35kD, SCGD	SGCD	S
Dystrophin-associated glycoprotein 35kD, SGSG	SGCG	S
Dystrophin-associated glycoprotein 43kD	SGCB	S
Dystrophin-associated glycoprotein 50kD	SGCA	S
Ectodermal Dysplasia 1 gene	ED1	S
Elastin	ELN	S
Endocardial fibroelastosis 2 gene	EFE2	S
Endoglin	ENG	S
Erythrocyte membrane protein band 4.1	EPB41	S
Erythrocyte membrane protein band 4.2	EPB42	S
Erythrocyte membrane protein band 7.2	EPB72	S
Exostosin 1	EXT1	S
Exostosin 2	EXT2	S
Exostosin 3	EXT3	S
Eye colour gene 3 (brown)	EYCL3	S
Fibrinogen alpha	FGA	S
Fibrinogen beta	FGB	S
Fibrinogen gamma	FGG	S
Glycophorin A	GYPA	S
Glycophorin B	GYPB	S
Glycophorin C	GYPC	S
Green cone pigment	GCP	S
Keratin 1	KRT1	S
Keratin 10	KRT10	S
Keratin 11	KRT11	S
Keratin 12	KRT12	S
Keratin 13	KRT13	S
Keratin 14	KRT14	S
Keratin 15	KRT15	S
Keratin 16	KRT16	S
Keratin 17	KRT17,PCHC1	S
Keratin 18	KRT18	S
Keratin 2	KRT2	S
Keratin 3	KRT3	S
Keratin 4	KRT4	S
Keratin 5	KRT5	S
Keratin 6	KRT6	S
Keratin 7	KRT7	S
Keratin 8	KRT8	S
Keratin 9	KRT9	S
Keratin, hair acidic 1	KRTHA1	S
Keratin, hair basic 2	KRTHB1	S
Keratin, hair basic 6	KRTHB6	S
Loricrin	LOR	S
Microtubule associated protein	MAP	S
Moesin, MSN		S

Myomesin 1	MYOM1	S
Myomesin 2	MYOM2	S
Myelin basic protein		S
Myelin protein peripheral 22	PMP22	S
Myelin protein zero	MPZ	S
Myosin 15	MYO15	S
Myosin 5A	MYO5A	S
Myosin 6	MYO6	S
Myosin 7A	MYO7A	S
Myosin, cardiac	MYH7	S
Myosin, light chain 2	MYL2	S
Myosin, light chain 3	MYL3	S
Myosin-binding protein C, cardiac	MYBPC3	S
Myotubularin	MTM1	S
Nebulin	NEB	S
Neurofilament protein, heavy	NFH	S
Neurofilament protein, NF125	NF150	S
Neurofilament protein, NF200	NF200	S
Neurofilament protein, NF68	NF68	S
Ocular albinism I	OA1	S
Oculocutaneous albinism II	OCA2	S
Osteocalcin		S
Peripherin, PRPH		S
Peroxisomal membrane protein 1	PXMP1	S
Persyn		S
Proline-rich protein BstNI subfamily 1	PRB1	S
Proline-rich protein BstNI subfamily 3	PRB3	S
Proline-rich protein BstNI subfamily 4	PRB4	S
Radixin	RDX	S
Red cone pigment	RCP	S
Retinal pigment epithelium specific protein (65kD)	RPE65	S
Retinitis pigmentosa gene 1	RP1	S
Retinitis pigmentosa gene 2	RP2	S
Retinitis pigmentosa gene 3	RP3	S
Retinitis pigmentosa gene 6	RP6	S
Retinitis pigmentosa gene 7	RP7, RDS	S
Rhodopsin	RHO	S
Rod outer segment membrane protein 1	ROM1	S
Semaphorin A4	SEMA4	S
Semaphorin A5	SEMA5	S
Semaphorin D		S
Semaphorin E	SEMAE	S
Semaphorin F	SEMA3/F	S
Semaphorin W	SEMAW	S
Small nuclear ribonucleoprotein polypeptide N	SNRPN	S
Spectrin alpha	SPTA1	S
Spectrin beta	SPTB	S
Talin, TLN		S
Tau protein	MAPT	S
Tenascin (cytotactin)		S

Tenascin XA	TNXA	S
Titin	TTN	S
Tropomyosin 1 alpha	TPM1	S
Tropomyosin 3 (non-muscle)	TPM3	S
Troponin C		S
Troponin I	TNNI3	S
Troponin T2, cardiac	TNNT2	S
Tubulin		S
Undulin 1	COL14A1	S
Usher syndrome 2A	USH2A	S
Villin		S
Vinculin		S
Wolfram syndrome 1 gene	WFS1	S
Zinc finger protein 198	ZIC198	S
Zinc finger protein 2	ZIC2	S
Zinc finger protein 3	ZIC3	S
Zinc finger protein HRX	ALL1	I
Alpha 2 macroglobulin	A2M	I
Annexin 1	ANX 1	I
Apoptosis antigen 1	APT1	I
Apoptosis antigen ligand 1	APT1LG1	I
Apoptosis-inducing factor	AIF	I
ATP-binding cassette transporter 7	ABC7	I
Attractin		I
Autoimmune regulator, AIRE	AIRE	I
B-cell CLL/lymphoma 1	BCL1	I
B-cell CLL/lymphoma 10	BCL10	I
B-cell CLL/lymphoma 3	BCL3	I
B-cell CLL/lymphoma 4	BCL4	I
B-cell CLL/lymphoma 5	BCL5	I
B-cell CLL/lymphoma 6	BCL6	I
B-cell CLL/lymphoma 7	BCL7	I
B-cell CLL/lymphoma 8	BCL8	I
B-cell CLL/lymphoma 9	BCL9	I
beta 2 microglobulin	B2M	I
Bradykinin receptor B1		I
Bradykinin receptor B2		I
Calcineurin A1	CALNA1	I
Calcineurin A2	CALNA2	I
Calcineurin A3	CALNA3	I
Calcineurin B		I
Catalase	CAT	I
CD1	CD1	I
CD10	CD10	I
CD100	CD100	I
CD101	CD101	I
CD103	CD103	I
CD106	CD106	I
CD107	CD107	I
CD108	CD108	I

CD109	CD109	I
CD110	CD110	I
CD111	CD111	I
CD112	CD112	I
CD113	CD113	I
CD114	CD114	I
CD115	CD115	I
CD116	CD116	I
CD117	CD117	I
CD118	CD118	I
CD119	CD119	I
CD12	CD12	I
CD120	CD120	I
CD121	CD121	I
CD122	CD122	I
CD123	CD123	I
CD124	CD124	I
CD125	CD125	I
CD126	CD126	I
CD127	CD127	I
CD128	CD128	I
CD129	CD129	I
CD13	CD13	I
CD130	CD130	I
CD131	CD131	I
CD132	CD132	I
CD133	CD133	I
CD134	CD134	I
CD135	CD135	I
CD136	CD136	I
CD137	CD137	I
CD138	CD138	I
CD139	CD139	I
CD14	CD14	I
CD140	CD140	I
CD141	CD141	I
CD142	CD142	I
CD143	CD143	I
CD144	CD144	I
CD145	CD145	I
CD147	CD147	I
CD148	CD148	I
CD149	CD149	I
CD15	CD15	I
CD150	CD150	I
CD151	CD151	I
CD152	CD152	I
CD153	CD153	I
CD154	CD154	I
CD155	CD155	I

CD156	CD156	I
CD157	CD157	I
CD158	CD158	I
CD159	CD159	I
CD160	CD160	I
CD161	CD161	I
CD162	CD162	I
CD163	CD163	I
CD164	CD164	I
CD165	CD165	I
CD166	CD166	I
CD17	CD17	I
CD19	CD19	I
CD2	CD2	I
CD20	CD20	I
CD22	CD22	I
CD23	CD23	I
CD24	CD24	I
CD25	CD25	I
CD26	CD26	I
CD27	CD27	I
CD28	CD28	I
CD3	CD3	I
CD30	CD30	I
CD31	CD31	I
CD33	CD33	I
CD34	CD34	I
CD36	CD36	I
CD37	CD37	I
CD38	CD38	I
CD39	CD39	I
CD4	CD4	I
CD40	CD40	I
CD41	CD41	I
CD42	CD42	I
CD43	CD43	I
CD44	CD44	I
CD45	CD45	I
CD46	CD46	I
CD47	CD47	I
CD48	CD48	I
CD5	CD5	I
CD50	CD50	I
CD52	CD52	I
CD53	CD53	I
CD55	CD55	I
CD57	CD57	I
CD58	CD58	I
CD59	CD59	I
CD6	CD6	I

CD60	CD60	I
CD63	CD63	I
CD65	CD65	I
CD66	CD66	I
CD67	CD67	I
CD68	CD68	I
CD69	CD69	I
CD7	CD7	I
CD70	CD70	I
CD71	CD71	I
CD72	CD72	I
CD73	CD73	I
CD74	CD74	I
CD75	CD75	I
CD76	CD76	I
CD77	CD77	I
CD78	CD78	I
CD79	CD79	I
CD8	CD8	I
CD80	CD80	I
CD81	CD81	I
CD83	CD83	I
CD84	CD84	I
CD85	CD85	I
CD86	CD86	I
CD88	CD88	I
CD89	CD89	I
CD9	CD9	I
CD90	CD90	I
CD91	CD91	I
CD92	CD92	I
CD93	CD93	I
CD94	CD94	I
CD96	CD96	I
CD97	CD97	I
CD98	CD98	I
CD99	CD99	I
Chemokine MCAF	MCAF	I
Chemokine receptor CCR2	CCR2	I
Chemokine receptor CCR3	CCR3	I
Chemokine receptor CCR5	CCR5	I
Chemokine receptor CXCR1	CXCR1	I
Chemokine receptor CXCR2	CXCR2	I
Chemokine receptor CXCR4	CXCR4	I
Cholesterylester hydrolase		I
Chondritin Sulphate A - placental receptor		I
Cochlin	COCH	I
Complement component C1 inhibitor	C1NH	I
Complement component C1qa	C1QA	I
Complement component C1qb	C1QB	I

Complement component C1qg	C1QG	I
Complement component C1r	C1R	I
Complement component C1s	C1S	I
Complement component C2	C2	I
Complement component C3 [†]	C3	I
Complement component C4A	C4A	I
Complement component C4B	C4B	I
Complement component C5	C5	I
Complement component C6	C6	I
Complement component C7	C7	I
Complement component C8	C8B	I
Complement component C9	C9	I
Complement component receptor 1	CR1	I
Complement component receptor 2	CR2	I
Complement component receptor 3	CR3	I
Corticosteroid nuclear receptor		I
Cortisol receptor		I
C-reactive protein CRP		I
Cyclophilin		I
Cytokine-suppressive antiinflammatory drug-binding protein 1	CSBP1	I
Cytokine-suppressive antiinflammatory drug-binding protein 2	CSBP2	I
DAX1 nuclear receptor	DAX1	I
Endo-P-D-glucuronidase		I
Erythropoietin	EPO	I
Erythropoietin receptor	EPOR	I
Factor I (No. one)	F1	I
Factor B, properdin		I
Factor D		I
Factor H	HF1	I
Factor I (letter I)	IF	I
Factor III	F3	I
Factor IX	F9	I
Factor V	F5	I
Factor VII	F7	I
Factor VIII	F8	I
Factor X	F10	I
Factor XI	F11	I
Factor XII	F12	I
Factor XIII A & B	F13A & F13B	I
Fc receptor		I
Follicular lymphoma variant translocation 1	FVT1	I
Gastrointestinal tumor-associated antigen 1	GA733	I
Growth-regulated protein precursor, GRO	GRO	I
Haptoglobin, alpha 1	HPA1	I
Haptoglobin, alpha 2	HPA2	I
Haptoglobin, beta	HPB	I
Heat shock protein, HSP60		I
Heat shock protein, HSP70		I

Heat shock protein, HSP90		I
Heat shock protein, HSPA1		I
Heat shock protein, HSPA2		I
Hemopexin	HPX	I
Heparin Cofactor II	HCF2	I
Hepatitis B virus integration site 1	HVBS1	I
Hepatitis B virus integration site 2	HVBS6	I
Histatin 1		I
Histatin 2		I
Histatin 3	HTN3	I
HLA-B associated transcript 1	BAT1	I
IC7 A and B		I
Immunoglobulin alpha (IgA)	IGHA	I
Immunoglobulin gamma (IgG) 2	IGHG2	I
Immunoglobulin delta (IgD)	IGHD	I
Immunoglobulin epsilon (IgE)	IGHE	I
Immunoglobulin E (IgE) responsiveness gene	IGER	I
Immunoglobulin E (IgE) serum concentration regulator gene	IGES	I
Immunoglobulin heavy mu chain	IGHM	I
Immunoglobulin J polypeptide	IGJ	I
Immunoglobulin kappa constant region	IGKC	I
Immunoglobulin kappa variable region	IGKV	I
Intercellular adhesion molecule 1	ICAM1	I
Intercellular adhesion molecule 2	ICAM2	I
Intercellular adhesion molecule 3	ICAM3	I
Interferon alpha	IFNA1	I
Interferon beta	IFNB	I
Interferon gamma	IFNG	I
Interferon gamma receptor 1	IFNGR1	I
Interferon gamma receptor 2	IFNGR2	I
Interferon regulatory factor 1	IRF1	I
Interferon regulatory factor 4	IRF4	I
Interleukin(IL) 1 receptor	IL1R	I
Interleukin(IL) 1, alpha	IL1A	I
Interleukin(IL) 1, beta	IL1B	I
Interleukin(IL) 10	IL10	I
Interleukin(IL) 10 receptor	IL10R	I
Interleukin(IL) 11	IL11	I
Interleukin(IL) 11 receptor	IL11R	I
Interleukin(IL) 12	IL12	I
Interleukin(IL) 12 receptor, beta 1	IL12RB1	I
Interleukin(IL) 13	IL13	I
Interleukin(IL) 13 receptor	IL13R	I
Interleukin(IL) 2	IL2	I
Interleukin(IL) 2 receptor, alpha	IL2RA	I
Interleukin(IL) 2 receptor, gamma	IL2RG	I
Interleukin(IL) 3	IL3	I
Interleukin(IL) 3 receptor	IL3R	I
Interleukin(IL) 4	IL4	I

Interleukin(IL) 4 receptor	IL4R	I
Interleukin(IL) 5	IL5	I
Interleukin(IL) 5 receptor	IL5R	I
Interleukin(IL) 6	IL6	I
Interleukin(IL) 6 receptor	IL6R	I
Interleukin(IL) 7	IL7	I
Interleukin(IL) 7 receptor	IL7R	I
Interleukin(IL) 8	IL8	I
Interleukin(IL) 8 receptor	IL8R	I
Interleukin(IL) 9	IL9	I
Interleukin(IL) 9 receptor	IL9R	I
Interleukin(IL) receptor antagonist 1	IL1RN, IL1RA	I
Kallikrein 3	KAK3	I
Kininogen, High molecular weight	KNG	I
Lectin, mannose-binding 1	LMAN1	I
Lectin, mannose-binding 2	MBL2	I
Leukin		I
Leukocyte-specific transcript 1	LST-1	I
Leukotriene A4 hydrolase		I
Leukotriene B4 receptor		I
Leukotriene C4 receptor		I
Leukotriene D4/E4 receptor		I
LIM-Kinase I (LINK-I)		I
Lipocortin 1	ANX4	I
Lipoprotein lipase	LPL	I
Lipoprotein-associated coagulation factor	LACI	I
Lipoxygenase 12 (platelets)	LOG12	I
Lipoxygenase 5 (leukocytes)		I
Lymphoblastic leukemia derived sequence 1	LYL1	I
Lymphocyte-specific protein tyrosine kinase	LCK	I
lymphotoxin		I
Lysozyme	LYZ	I
Macrophage activating factor	MAF	I
Macrophage inflammatory protein-1	MIP1	I
Macrophage inflammatory protein-1 receptor		I
Macrophage inflammatory protein-2	MIP2	I
Macrophage inflammatory protein-2 receptor		I
Malignant proliferation, eosinophil gene	MPE	I
Mannose binding protein	MBP	I
MHC Class I: A		I
MHC Class I: B		I
MHC Class I: C		I
MHC Class I: LMP-2, LMP-7		I
MHC Class I: Tap1	ABCR, TAP1	I
MHC Class II: DP	HLA-DPB1	I
MHC Class II: DQ		I
MHC Class II: DR		I
MHC Class II: Tap2	TAP2, PSF2	I
MHC Class II: Complementation group A	MHC2TA	I
MHC Class II: Complementation group B	rfxank	I

MHC Class II: Complement group C	RFX5	I
MHC Class II: Complement group D	RFXAP	I
Monocyte chemoattractant protein 1	MCP1	I
Myeloid leukemia factor-1	MLF1	I
Myeloperoxidase	MPO	I
N-acyl hydrolase		I
NADPH oxidase		I
Natural resistance-associated macrophage protein 1	NRAMP1	I
NB6		I
Neuronal apoptosis inhibitory protein	NAIP	I
Neuronal molecule-1		I
Neuronal molecule-1 receptor		I
Neutrophil cystolic factor 1	NCF1	I
Neutrophil cystolic factor 2	NCF2	I
Nuclear factor I-kappa-B-like gene	IKBL	I
Nuclear factor kappa beta	NFKB	I
Peanut-like 1	PNUTL1	I
Phagocytin		I
Phospholipase A2, group 10	PLA2G10	I
Phospholipase A2, group 1B	PLA2G1B	I
Phospholipase A2, group 2A	PLA2G2A	I
Phospholipase A2, group 2B	PLA2G2B	I
Phospholipase A2, group 4A	PLA2G4A	I
Phospholipase A2, group 4C	PLA2G4C	I
Phospholipase A2, group 5	PLA2G5	I
Phospholipase A2, group 6	PLA2G6	I
Phospholipase C alpha		I
Phospholipase C beta		I
Phospholipase C delta	PLCD1	I
Phospholipase C epsilon		I
Phospholipase C gamma	PLCG1	I
Platelet glycoprotein 1b, alpha	GP1BA	I
Platelet glycoprotein 1b, beta	GP1BB	I
Platelet glycoprotein 1b, gamma	GP1BG	I
Platelet glycoprotein IX	GP9	I
Platelet glycoprotein V	GP5	I
Platelet-activating factor acetylhydrolase 1B	PAFAH1B1 or LIS1	I
Platelet-activating factor acetylhydrolase 2	PAFAH2	I
Platelet-activating factor receptor	PAFR	I
Poliovirus receptor	PVR, PVS	I
Prekallikrein		I
Properdin P factor, complement	PFC, PFD	I
Prostacyclin synthase		I
Prostaglandin 15-OH dehydrogenase	HGPD; PGDH	I
Prostaglandin D - DP receptor		I
Prostaglandin E1 receptor		I
Prostaglandin E2 receptor		I
Prostaglandin E3 receptor		I
Prostaglandin F - FP receptor		I
Prostaglandin F2 alpha receptor		I

Prostaglandin IP receptor		I
Protein C	PROC	I
Protein C inhibitor	PCI	I
Protein S	PROS1	I
Proteinase 3		I
Prothrombin precursor	F2	I
SAP (SLAM-associated protein)	SH2D1A	I
Severe combined immunodeficiency, type A (Athabaskan)	SCIDA	I
Signaling lymphocyte activation molecule	SLAM	I
Sjogren (Sjogren) syndrome antigen A1	SSA1	I
SYK-related tyrosine kinase	SRK	I
T-cell acute lymphocytic leukemia 1	TAL1	I
T-cell acute lymphocytic leukemia 2	TAL2	I
T-cell receptor, alpha	TCRA	I
T-cell receptor, delta	TCRD	I
Terminal deoxynucleotidyltransferase	TDT	I
Thrombin receptor	F2R	I
Thrombomodulin	THBD	I
Thromboxane A synthase 1	TBXAS1	I
Thromboxane A2	TXA2	I
Thromboxane A2 receptor	TBXA2R	I
Thy-1 T-cell antigen	THY1	I
Thymic humoral factor		I
Thymosin		I
Tip-associated protein	TAP	I
Toll-like receptor 4	TLR4	I
Tumour necrosis factor (TNF) receptor associated factor 1	TRAF1	I
Tumour necrosis factor (TNF) receptor associated factor 2	TRAF2	I
Tumour necrosis factor (TNF) receptor associated factor 3	TRAF3	I
Tumour necrosis factor (TNF) receptor associated factor 4	TRAF4	I
Tumour necrosis factor (TNF) receptor associated factor 5	TRAF5	I
Tumour necrosis factor (TNF) receptor associated factor 6	TRAF6	I
Tumour necrosis factor alpha	TNFA	I
Tumour necrosis factor alpha receptor	TNFAR	I
Tumour necrosis factor beta	TNFB	I
Tumour necrosis factor beta receptor	TNFBR	I
Tumour suppressor gene DRA	DRA	I
Uridine monophosphate kinase	UMPK	I
Uridine monophosphate synthetase	UMPS	I
Vimentin	VIM	I
Wiskott-Aldrich syndrome protein	WASP, THC	I
17-ketosteroid reductase		N
Acetylcholine receptor, nicotinic, alpha A1	CHRNA1	N

Acetylcholine receptor, nicotinic, alpha A2	CHRNA2	N
Acetylcholine receptor, nicotinic, alpha A3	CHRNA3	N
Acetylcholine receptor, nicotinic, alpha A4	CHRNA4	N
Acetylcholine receptor, nicotinic, alpha A5	CHRNA5	N
Acetylcholine receptor, nicotinic, alpha A6	CHRNA6	N
Acetylcholine receptor, nicotinic, alpha A7	CHRNA7	N
Acetylcholine receptor, nicotinic, beta 1	CHRNA1	N
Acetylcholine receptor, nicotinic, beta 2	CHRNA2	N
Acetylcholine receptor, nicotinic, beta 3	CHRNA3	N
Acetylcholine receptor, nicotinic, beta 4	CHRNA4	N
Acetylcholine receptor, nicotinic, epsilon	CHRNAE	N
Acetylcholine receptor, nicotinic, gamma	CHRNA7	N
Adenosine receptor A1	ADORA1	N
Adenosine receptor A2A	ADORA2A	N
Adenosine receptor A2B	ADORA2B	N
Adenosine receptor A3	ADORA3	N
Adenyl cyclase		N
Adrenergic receptor, alpha1	ADRA1	N
Adrenergic receptor, alpha2	ADRA2	N
Adrenergic receptor, beta1	ADRB1	N
Adrenergic receptor, beta2	ADRB2	N
Adrenergic receptor, beta3	ADRB3	N
alpha thalassemia gene	ATRX	N
alpha-synuclein	SNCA	N
Amyloid beta (A4) precursor protein-binding, APBB1	APBB1	N
Amyloid beta A4 precursor protein	APP	N
Amyloid beta A4 precursor-like protein	APLP	N
Arginine vasopressin	AVP	N
Arginine vasopressin receptor 1A	AVPR1A	N
Arginine vasopressin receptor 1B	AVPR1B	N
Arginine vasopressin receptor 2	AVPR2	N
Aspartate receptor		N
Benzodiazepine receptor		N
beta-endorphin receptor		N
beta-synuclein	SNCB	N
Calcitonin receptor /Calcitonin gene-related peptide receptor	CALCR	N
Calcitonin/Calcitonin gene-related peptide alpha	CALCA	N
Calcium channel, voltage-dependent, alpha 1F subunit	CACNA1F	N
Calcium channel, voltage-dependent, Alpha-1B (CACNL1A5)	CACNA1B	N
Calcium channel, voltage-dependent, Alpha-1C	CACNA1C	N
Calcium channel, voltage-dependent, Alpha-1D	CACNA1D	N
Calcium channel, voltage-dependent, Alpha-1E (CACNL1A6)	CACNA1E	N
Calcium channel, voltage-dependent, Alpha-2/delta	CACNA2	N
Calcium channel, voltage-dependent, Beta 1	CACNB1	N
Calcium channel, voltage-dependent, Beta 3	CACNB3	N

Calcium channel, voltage-dependent, L type, alpha 1S subunit	CACNA1S	N
Calcium channel, voltage-dependent, Neuronal, Gamma	CACNG2	N
Calcium channel, voltage-dependent, P/Q type, alpha 1A subunit	CACNA1A	N
Calcium channel, voltage-dependent, T-type		N
Calretinin	CALB2	N
Cannabinoid receptor	CNR1	N
Carnosinase		N
Cartilage oligomeric matrix protein	COMP, EDM1, PSACH	N
Cartilage-hair hypoplasia gene	CHH	N
Cellubrevin	CEB	N
Ceroid lipofuscinosis neuronal 2	CLN2	N
Ceroid lipofuscinosis neuronal 3	CLN3	N
Ceroid lipofuscinosis neuronal 4	CLN4	N
Ceroid lipofuscinosis neuronal 5	CLN5	N
Ceroid lipofuscinosis neuronal 6	CLN6	N
Cholecystokinin	CCK	N
Cholecystokinin B receptor	CCKBR	N
Corticosteroid binding globulin	CBG	N
Cyclic nucleotide gated channel alpha 1, CNGA1	CNGA1	N
Cyclic nucleotide gated channel alpha 3, CNGA3	CNGA3	N
Cystic fibrosis transmembrane conductance regulator, CFTR	CFTR	N
Deafness autosomal dominant 5	DFNA5	N
Deafness dystonia peptide	DDP	N
Diaphanous 1	DIAPH1	N
Diaphanous 2	DIAPH2	N
Dihydrolipoamide branched chain transacylase	DBT	N
Dihydrolipoamide dehydrogenase	DLD	N
Dihydrolipoamide succinyltransferase		N
Dopamine receptors D1	DRD1	N
Dopamine receptors D2	DRD2	N
Dopamine receptors D3	DRD3	N
Dopamine receptors D4	DRD4	N
Dopamine receptors D5	DRD5	N
Dynorphin receptor		N
Endobrevin	VAMP8	N
Endothelin 1	EDN1	N
Endothelin 2	EDN2	N
Endothelin 3	EDN3	N
Endothelin converting enzyme	ECE1	N
Endothelin receptor type A	EDNRA	N
Endothelin receptor type B	EDNRB	N
Fragile site, folic acid type, rare, fra(X) A	FRAXA	N
Fragile site, folic acid type, rare, fra(X) E	FRAXE	N
Fragile site, folic acid type, rare, fra(X) F	FRAXF	N
GABA receptor, alpha 1	GABRA1	N

GABA receptor, alpha 2	GABRA2	N
GABA receptor, alpha 3	GABRA3	N
GABA receptor, alpha 4	GABRA4	N
GABA receptor, alpha 5	GABRA5	N
GABA receptor, alpha 6	GABRA6	N
GABA receptor, beta 1	GABRB1	N
GABA receptor, beta 2	GABRB2	N
GABA receptor, beta 3	GABRB3	N
GABA receptor, gamma 1	GABRG1	N
GABA receptor, gamma 2	GABRG2	N
GABA receptor, gamma 3	GABRG3	N
Galanin	GAL	N
Galanin receptor	GALNR1	N
Gephyrin		N
Glial-cell derived neurotrophic factor (GDNF) receptor		N
Glial-cell derived neurotrophic factor, GDNF	GDNF	N
Glutamate receptor 1	GLUR1	N
Glutamate receptor 2	GLUR2	N
Glutamate receptor 3	GLUR3	N
Glutamate receptor 4	GLUR4	N
Glutamate receptor 5	GLUR5	N
Glutamate receptor 6	GLUR6	N
Glutamate receptor 7	GLUR7	N
Glutamate receptor, ionotropic, NMDA 1	NMDAR1	N
Glutamate receptor, ionotropic, NMDA 2A	NMDAR2A	N
Glutamate receptor, ionotropic, NMDA 2B	NMDAR2B	N
Glutamate receptor, ionotropic, NMDA 2C	NMDAR2C	N
Glutamate receptor, ionotropic, NMDA 2D	NMDAR2D	N
Glycine receptor, alpha	GLRA2	N
Glycine receptor, beta		N
Glycine transporter	GLYT	N
Guanine nucleotide-binding protein, alpha inhibiting activity polypeptide 1, GNAI1	GNAI1	N
Guanine nucleotide-binding protein, alpha inhibiting activity polypeptide 2, GNAI2	GNAI2	N
Guanine nucleotide-binding protein, alpha inhibiting activity polypeptide 3, GNAI3	GNAI3	N
Guanine nucleotide-binding protein, alpha stimulating activity polypeptide, GNAS1	GNAS1	N
Guanine nucleotide-binding protein, alpha stimulating activity polypeptide, GNAS2	GNAS2	N
Guanine nucleotide-binding protein, alpha stimulating activity polypeptide, GNAS3	GNAS3	N
Guanine nucleotide-binding protein, alpha stimulating activity polypeptide, GNAS4	GNAS4	N
Guanine nucleotide-binding protein, alpha transducing activity polypeptide, GNAT1	GNAT1	N
Guanine nucleotide-binding protein, alpha transducing activity polypeptide, GNAT2	GNAT2	N

Guanine nucleotide-binding protein, alpha activating activity polypeptide, GNAO	GNAO1	N
Guanine nucleotide-binding protein, beta polypeptide 3	GNB3	N
Guanine nucleotide-binding protein, gamma polypeptide 5	GNG5	N
Guanine nucleotide-binding protein, q polypeptide	GNAQ	N
Gustducin, alpha (taste-specific G protein)	GDCA	N
H(+), K(+) - ATPase	ATP4B	N
Hippocampal cholinergic neurostimulating peptide, HCNP		N
Histamine receptors, H1		N
Histamine receptors, H2		N
Histamine receptors, H3		N
Inositol monophosphatase	IMPA1	N
Inositol polyphosphate 1-phosphatase	INPP1	N
Islet amyloid polypeptide	IAPP	N
L1 cell adhesion molecule	L1CAM	N
Luteinizing hormone-releasing hormone		N
Luteinizing hormone-releasing hormone receptor		N
Melatonin receptor 1A	MTNR1A	N
Melatonin receptor 1B	MTNR1B	N
Muscarinic receptor, M1	CHRM1	N
Muscarinic receptor, M2	CHRM2	N
Muscarinic receptor, M3	CHRM3	N
Muscarinic receptor, M4	CHRM4	N
Muscarinic receptor, M5	CHRM5	N
Neurexin		N
Neurite growth-promoting factor 2	MDK	N
Neurite inhibitory protein		N
Neurokinin A	NKNA	N
Neurokinin B	NKNB	N
Neuropeptide Y	NPY	N
Neuropeptide Y receptor Y1	NPY1R	N
Neuropeptide Y receptor Y2	NPY2R	N
Neurotensin	NTS	N
Neurotensin receptor	NTSR1	N
Opioid receptor, delta	OPRD1	N
Opioid receptor, kappa	OPRK1	N
Opioid receptor, mu	OPRM1	N
Otoferlin	OTOF	N
Oxytocin	OXT	N
Oxytocin receptor	OXTR	N
Parkin	PARK2	N
Pituitary adenylate cyclase activating peptide	PACAP	N
Pituitary adenylate cyclase activating peptide receptor	PACAP1R	N
Postsynaptic density-95 protein	PSD95	N
Potassium inwardly-rectifying channel J1	KCNJ1	N
Potassium inwardly-rectifying channel J11	KCNJ11	N
Potassium voltage-gated channel A1	KCNA1	N

Potassium voltage-gated channel E1	KCNE1	N
Potassium voltage-gated channel Q1	KCNQ1	N
Potassium voltage-gated channel Q2	KCNQ2	N
Potassium voltage-gated channel Q3	KCNQ3	N
Potassium voltage-gated channel Q4	KCNQ4	N
Potassium channel, subfamily K, member 1	KCNK1	N
Potassium channel, subfamily K, member 2	KCNK2	N
Potassium channel, subfamily K, member 3	KCNK3	N
Potassium channel, calcium-activated,	KCNN4	N
Preproenkephalin	PENK	N
Prion protein	PRNP	N
Prodynorphin		N
Proopiomelanocortin	POMC	N
Prosaposin	PSAP	N
Proteolipid protein	PLP	N
Purinergic receptor P1A1		N
Purinergic receptor P1A2		N
Purinergic receptor P1A3		N
Purinergic receptor P2X, 1	P2RX1	N
Purinergic receptor P2X, 2	P2RX2	N
Purinergic receptor P2X, 3	P2RX3	N
Purinergic receptor P2X, 4	P2RX4	N
Purinergic receptor P2X, 5	P2RX5	N
Purinergic receptor P2X, 6	P2RX6	N
Purinergic receptor P2X, 7	P2RX7	N
Purinergic receptor P2Y, 1	P2RY1	N
Purinergic receptor P2Y, 2	P2RY2	N
Purinergic receptor P2Y, 11	P2RY11	N
Rabphilin		N
RAS-associated protein, RAB3A	RAB3A	N
Rim		N
S100 calcium-binding protein A1	S100A1	N
S100 calcium-binding protein A2	S100A2	N
S100 calcium-binding protein A3	S100A3	N
S100 calcium-binding protein A4	S100A4	N
S100 calcium-binding protein A5	S100A5	N
S100 calcium-binding protein A6	S100A6	N
S100 calcium-binding protein A7	S100A7	N
S100 calcium-binding protein A8	S100A8	N
S100 calcium-binding protein A9	S100A9	N
S100 calcium-binding protein B	S100B	N
S100 calcium-binding protein P	S100P	N
Secretase, alpha		N
Secretase, beta		N
Secretase, gamma		N
Selectin E	SELE	N
Selectin L	SELL	N
Selectin P	SELP	N
Serotonin receptor, 5HT1A	HTR1A	N
Serotonin receptor, 5HT1B	HTR1B	N

Serotonin receptor, 5HT1C	HTR1C	N
Serotonin receptor, 5HT1D	HTR1D	N
Serotonin receptor, 5HT1E	HTR1E	N
Serotonin receptor, 5HT1F	HTR1F	N
Serotonin receptor, 5HT2A	HTR2A	N
Serotonin receptor, 5HT2B	HTR2B	N
Serotonin receptor, 5HT2C	HTR2C	N
Serotonin receptor, 5HT3	HTR3	N
Serotonin receptor, 5HT4	HTR4	N
Serotonin receptor, 5HT5	HTR5	N
Serotonin receptor, 5HT6	HTR6	N
Serotonin receptor, 5HT7	HTR7	N
Sodium channel, non-voltage gated 1, alpha	SCNN1A	N
Sodium channel, non-voltage gated 1, beta	SCNN1B	N
Sodium channel, non-voltage gated 1, gamma	SCNN1G	N
Sodium channel, voltage gated, type IV, alpha polypeptide	SCN4A	N
Sodium channel, voltage gated, type V, alpha polypeptide	SCN5A	N
Sodium channel, voltage-gated, type 1, beta polypeptide	SCN1B	N
Somatostatin	SST	N
Somatostatin receptor, SSTR1	SSTR1	N
Somatostatin receptor, SSTR2	SSTR2	G
Somatostatin receptor, SSTR3	SSTR3	N
Somatostatin receptor, SSTR4	SSTR4	N
Somatostatin receptor, SSTR5	SSTR5	N
Spinocerebellar ataxia 8 gene	SCA8	N
Substance P		N
Synapsin 1a & 1b	SYN1	N
Synapsin 2a & 2b	SYN2	N
Synaptic vesicle amine transporter	SVAT	N
Synaptic vesicle protein 2	SV2	N
Synaptobrevin 1	SYB1	N
Synaptobrevin 2	SYB2	N
Synaptogyrin		N
Synaptophysin	SYP	N
Synaptosomal-associated protein, 25KD	SNAP25	N
Synaptotagmin 1	SYT1	N
Synaptotagmin 2	SYT2	N
Syntaxin 1	STX1	N
Tachykinin receptor, NK1R	TACR1	N
Tachykinin receptor, NK2R	TACR2	N
Tachykinin receptor, NK3R	TACR3	N
Thyrotropin releasing hormone	TRH	N
Thyrotropin releasing hormone receptor	TRHR	N
Transcription factor, TUPLE1	TUPLE1	N
Tremor, essential 1	ETM1	N
Tremor, essential 2	ETM2	N
Tryptophan 2,3-dioxygenase	TDO2	N

Vacuolar proton pump, subunit 1	VPP1	N
Vacuolar proton pump, subunit 3	VPP3	N
Vasoactive intestinal polypeptide	VIP	N
Vasoactive intestinal polypeptide receptor	VIPR	N
Vesicular monoamine transporter 1	VMAT1	N
Vesicular monoamine transporter 2	VMAT2	N
Absent in melanoma 1 gene	AIM1	G
Acrosin	ACR	G
Activin		G
Activin A receptor, type 2-like kinase 1	ACVRL1	G
Activin A receptor, type 2B	ACVR2B	G
Adenomatous polyposis coli tumour suppressor gene	APC	G
Adrenocorticotrophic hormone (ACTH) receptor	ACTHR	G
Aldosterone receptor	MLR	G
Alkaptonuria gene	AKU	G
alpha tectorin	TECTA	G
alpha-actinin 2	ACTN2	G
alpha-actinin 3	ACTN3	G
Alpha-fetoprotein	AFP	G
Amphiregulin	AREG	G
Androgen receptor	AR	G
Angiopoietin 1	ANGPT1	G
Angiopoietin 2	ANGPT2	G
Anti-Mullerian hormone	AMH	G
Anti-Mullerian hormone type 2 receptor	AMHR2	G
AP-2, alpha	TFAP2A	G
AP-2, beta	TFAP2B	G
AP-2, gamma	TFAP2C	G
Apical protein, xenopus laevis-like	APXL	G
Apopain	CPP32	G
Archaete-scute homolog 1	ASH1	G
Archaete-scute homolog 2	ASH2	G
Astrotactin	ASTN	G
Ataxia telangiectasia complementation group D	ATD, ATDC	G
Ataxia telangiectasia gene, AT	ATM	G
Ataxin 1	SCA1	G
Ataxin 2	SCA2	G
Ataxin 3	MJD	G
Atrial natriuretic peptide	ANP	G
Atrial natriuretic peptide receptor A	NPR1	G
Atrial natriuretic peptide receptor B	NPR2	G
Atrial natriuretic peptide receptor C	NPR3	G
Atrophin 1	DRPLA	G
Azoospermia factor 1	AZF1	G
Bagpipe homeobox, drosophila homolog of, 1	BAPX1	G
BCL2-associated X protein	BAX	G
BCL2-related protein A1	BCL2A1	G
Beckwith-Wiedemann region 1A	BWR1A	G
Bloom syndrome protein	BLM	G
Bone morphogenetic protein, BMP1	BMP1	G

Bone morphogenetic protein, BMP2	BMP2	G
Bone morphogenetic protein, BMP3	BMP3	G
Bone morphogenetic protein, BMP4	BMP4	G
Bone morphogenetic protein, BMP5	BMP5	G
Bone morphogenetic protein, BMP6	BMP6	G
Bone morphogenetic protein, BMP7	BMP7	G
Bone morphogenetic protein, BMP8	BMP8	G
Brain derived neurotrophic factor	BDNF	G
Brain derived neurotrophic factor (BDNF) receptor	BDNFR	G
BRCA1-associated RING domain gene 1	BARD1	G
Breakpoint cluster region	BCR	G
Breast cancer 1	BRCA1	G
Breast cancer 2	BRCA2	G
Breast cancer, ductal, 1	BRCD1	G
Breast cancer, ductal, 2	BRCD2	G
Bruton agammaglobulinaemia tyrosine kinase	BTK	G
Cadherin E	CDH1	G
Cadherin EP		G
Cadherin N	CDH2	G
Cadherin P	CDH3	G
Calbindin 1	CALB1	G
Calbindin D9K	CALB3	G
Calmodulin 1	CALM1	G
Calmodulin 2	CALM2	G
Calmodulin 3	CALM3	G
Calmodulin-dependant protein kinase II	CAMK2A	G
Calnexin	CANX	G
Cardiac-specific homeobox, CSX	CSX	G
Caspase 1	CASP1	G
Caspase 10	CASP10	G
Caspase 2	CASP2	G
Caspase 3	CASP3	G
Caspase 4	CASP4	G
Caspase 5	CASP5	G
Caspase 6	CASP6	G
Caspase 7	CASP7	G
Caspase 8	CASP8	G
Caspase 9	CASP9	G
Catenin, alpha	CTNNA1	G
Catenin, beta	CTNNB1	G
Catenin, gamma		G
Cdc 25 phosphatase		G
Cdc2	CDC2	G
CDX1		G
CEA		G
Cell adhesion molecule, intercellular, ICAM	ICAM1	G
Cell adhesion molecule, leukocyte-endothelial, LECAM (CD62)	LECAM1	G
Cell adhesion molecule, liver, LCAM	LCAM	G
Cell adhesion molecule, neural, NCAM1	NCAM1	G

Cell adhesion molecule, neural, NCAM120	NCAM120	G
Cell adhesion molecule, neural, NCAM2	NCAM2	G
Cell adhesion molecule, platelet-endothelial, PECAM	PECAM1	G
Cell adhesion molecule, vascular, VCAM	VCAM1	G
c-erbB1	ERBB1	G
c-erbB2	ERBB2	G
c-erbB3	ERBB3	G
c-erbB4	ERBB4	G
Cholestasis, progressive familial intrahepatic 1 gene	FIC1	G
Chromogranin A	CHGA	G
Ciliary neurotrophic factor (CNTF)	CNTF	G
Ciliary neurotrophic factor (CNTF) receptor	CNTFR	G
c-kit receptor tyrosine kinase		G
Cleavage signal-1 protein	CS1	G
Cleft palate gene	CPX	G
Clusterin	CLU	G
Cockayne syndrome gene, CKN1	CKN1	G
Collapsin		G
Colony-stimulating factor 1	CSF1	G
Colony-stimulating factor 1 receptor	CSF1R	G
Colony-stimulating factor 2	CSF2	G
Colony-stimulating factor 2 alpha receptor	CSF2RA	G
Colony-stimulating factor 2 beta receptor	CSF2RB	G
Colony-stimulating factor 3	CSF3	G
Colony-stimulating factor 3 receptor	CSF3R	G
Cone-rod homeobox-containing gene	CRX	G
Contactin	CNTN1	G
Core-binding factor, alpha 1	CBFA1	G
Core-binding factor, alpha 2	CBFA2	G
Core-binding factor, beta	CBFB	G
Creb binding protein	CREBBP	G
c-src tyrosine kinase	CSK	G
Cyclic AMP response element binding protein	CREB	G
Cyclic AMP response element modulator	CREM	G
Cyclic AMP-dependent protein kinase	PKA	E
Cyclin A	CCNA	G
Cyclin B	CCNB	G
Cyclin C	CCNC	G
Cyclin D	CCND1	G
Cyclin E	CCNE	G
Cyclin F	CCNF	G
Cyclin-dependent kinase 1	CDK1	G
Cyclin-dependent kinase 10	CDK10	G
Cyclin-dependent kinase 2	CDK2	G
Cyclin-dependent kinase 3	CDK3	G
Cyclin-dependent kinase 4	CDK4	G
Cyclin-dependent kinase 5	CDK5	G
Cyclin-dependent kinase 6	CDK6	G
Cyclin-dependent kinase 7	CDK7	G

Cyclin-dependent kinase 8	CDK8	G
Cyclin-dependent kinase 9	CDK9	G
Cyclin-dependent kinase inhibitor 1A (P21, CIP1)	CDKN1A	G
Cyclin-dependent kinase inhibitor 1B (P27, KIP1)	CDKN1B	G
Cyclin-dependent kinase inhibitor 1C (P57, KIP2)	CDKN1C	G
Cyclin-dependent kinase inhibitor 2A (p16)	CDKN2A	G
Cyclin-dependent kinase inhibitor 3	CDKN3	G
Defender against cell death 1	DAD1	G
Deleted in azoospermia	DAZ	G
Deleted in colorectal carcinoma	DCC	G
Deleted in malignant brain tumours 1	DMBT1	G
Dentin sialophosphoprotein	DSPP	G
Desert hedgehog, dhh		G
Disrupted meiotic cDNA 1, homolog	DMC1	G
Distal-less homeobox 1	DLX1	G
Distal-less homeobox 2	DLX2	G
Distal-less homeobox 3	DLX3	G
Distal-less homeobox 4	DLX4	G
Distal-less homeobox 5	DLX5	G
Distal-less homeobox 6	DLX6	G
Dynamin	DNM1	G
Dynein		G
E74-like factor 1, ELF1	ELF1	G
EB1		G
Empty spiracles (drosophila) homologue 1	EMX1	G
Empty spiracles (drosophila) homologue 2	EMX2	G
Endometrial bleeding-associated factor	EBAF	G
Engrailed-1	EN1	G
Engrailed-2	EN2	G
Ephrin receptor tyrosine kinase A	EPHA	G
Ephrin receptor tyrosine kinase B	EPHB	G
Ephrin-A	EFNA	G
Ephrin-B	EFNB	G
Epidermal growth factor	EGF	G
Epidermal growth factor receptor	EGFR	G
Erythroid kruppel-like factor	EKLF	G
Estrogen receptor	ESR	G
Eukaryotic initiation translation factor	EIF4E	G
EWS RNA-binding protein	EWSR1	G
Eyes absent 1	EYA1	G
Eyes absent 2	EYA2	G
Eyes absent 3	EYA3	G
Fc fragment of IgG, high affinity IA, receptor for	FCGR1A	G
Fc fragment of IgG, low affinity IIa, receptor for (CD32)	FCGR2A	G
Fc fragment of IgG, low affinity IIIa, receptor for (CD16)	FCGR3A	G
Fertilin protein	FTNB	G
Fibrillin 1	FBN1	G
Fibrillin 2	FBN2	G

Fibroblast growth factor	FGF1	G
Fibroblast growth factor receptor 1	FGFR1	G
Fibroblast growth factor receptor 2	FGFR2	G
Fibroblast growth factor receptor 3	FGFR3	G
Fibronectin precursor	FN1	G
Flightless-II, Drosophila homolog of	FLII	G
Folic acid receptor	FOLR	G
Follicle stimulating hormone receptor	FSHR, ODG1	G
Follicle stimulating hormone, FSH	FSHB	G
Follistatin		G
Forkhead rhabdomyosarcoma gene	FKHR	G
Forkhead transcription factor 10	FKHL10	G
Forkhead transcription factor 14	FKHL14	G
Forkhead transcription factor 7	FKHL7	G
Frataxin	FRDA	G
Fringe secreted protein, lunatic	LFNG	G
Fringe secreted protein, manic	MFNG	G
Fringe secreted protein, radical	RFNG	G
Fukuyama type congenital muscular dystrophy	FCMD	G
G/T mismatch binding protein	GTBP, MSH6	G
Galactosyltransferase 1	GT1	G
Galactosyltransferase, alpha 1,3	GGTA1	G
Galactosyltransferase, beta 3	B3GALT	G
Gastrin	GAS	G
Gastrulation brain homeobox 2	GBX2	G
GDP dissociation inhibitor 1	GDI1	G
Gelsolin	GSN	G
Geniospasm 1	GSM1	G
Glioma chloride ion channel, GCC		G
Glucagon receptor	GCGR	G
Glucagon-like peptide receptor 1	GLP1R	G
Glucocorticoid receptor	GRL	G
Glypican 3	GPC3, SDYS	G
Gonadotropin releasing hormone	GNRH	G
Gonadotropin releasing hormone receptor	GNRHR	G
Goosecoid GSC		G
Growth arrest-specific homeobox	GAX	G
Growth factor receptor-bound protein 2	GRB2	G
Growth hormone 1	GH1	G
Growth hormone 2 (placental)	GH2	G
Growth hormone receptor	GHR	G
Growth hormone releasing hormone (GHRH)	GHRH	G
Growth hormone releasing hormone receptor	GHRHR	G
Growth/differentiation factor 5	GDF5	G
GTP cylcohydrolase 1	GCH1	G
GTPase-activating protein, GAP	RASA1	G
Hairless	HR	G
Hela tumor suppression gene	HTS1	G
Heparin binding epidermal growth factor	HBEGF	G
Hepatocyte growth factor	HGF	G

High mobility group protein 1	HMG1	G
High mobility group protein 2	HMG2	G
High mobility group protein C	HMGIC	G
High mobility group protein Y	HMG1Y	G
Histone family H1	H1	G
Histone family H2	H2	G
Histone family H3	H3	G
Histone family H4	H4	G
HLH transcription factor HAND1	HAND1	G
HLH transcription factor HAND2	HAND2	G
Holoprosencephaly 1	HPE1	G
Holoprosencephaly 2	HPE2	G
Holoprosencephaly 3	HPE3	G
Holoprosencephaly 4	HPE4	G
Homeobox (HOX) gene A1	HOXA1	G
Homeobox (HOX) gene A2	HOXA2	G
Homeobox (HOX) gene A3	HOXA3	G
Homeobox (HOX) gene A4	HOXA4	G
Homeobox (HOX) gene A5	HOXA5	G
Homeobox (HOX) gene A6	HOXA6	G
Homeobox (HOX) gene A7	HOXA7	G
Homeobox (HOX) gene A8	HOXA8	G
Homeobox (HOX) gene A9	HOXA9	G
Homeobox (HOX) gene A10	HOXA10	G
Homeobox (HOX) gene A11	HOXA11	G
Homeobox (HOX) gene A12	HOXA12	G
Homeobox (HOX) gene A13	HOXA13	G
Homeobox (HOX) gene B1	HOXB1	G
Homeobox (HOX) gene B2	HOXB2	G
Homeobox (HOX) gene B3	HOXB3	G
Homeobox (HOX) gene B4	HOXB4	G
Homeobox (HOX) gene B5	HOXB5	G
Homeobox (HOX) gene B6	HOXB6	G
Homeobox (HOX) gene B7	HOXB7	G
Homeobox (HOX) gene B8	HOXB8	G
Homeobox (HOX) gene B9	HOXB9	G
Homeobox (HOX) gene C4	HOXC4	G
Homeobox (HOX) gene C8	HOXC8	G
Homeobox (HOX) gene C9	HOXC9	G
Homeobox (HOX) gene C13	HOXC13	G
Homeobox (HOX) gene D1	HOXD1	G
Homeobox (HOX) gene D3	HOXD3	G
Homeobox (HOX) gene D4	HOXD4	G
Homeobox (HOX) gene D8	HOXD8	G
Homeobox (HOX) gene D9	HOXD9	G
Homeobox (HOX) gene D10	HOXD10	G
Homeobox (HOX) gene D12	HOXD12	G
Homeobox (HOX) gene D13	HOXD13	G
Homeobox 11	HOX11	G
Homeobox HB24	HLX1	G

Homeobox HB9	HLXB9	G
Homeobox, PROX1	PROX1	G
Human atonal gene	ATOH1	G
Human chorionic gonadotrophin, hCG	CG	G
Human placental lactogen	CSH1	G
Ikaros gene	IKAROS	G
Indian hedgehog, ihh	IHH	G
Inhibin, alpha	INH1	G
Inhibin, beta A	INHBA	G
Inhibin, beta B	INHBB	G
Inhibin, beta C	INHBC	G
Inositol 1,4,5-triphosphate receptor 1	ITPR1	G
Inositol 1,4,5-triphosphate receptor 3	ITPR3	G
Insulin	INS	G
Insulin promotor factor 1	IPF1	G
Insulin receptor	INSR	G
Insulin receptor substrate-1	IRS1	G
Insulin-like growth factor 1	IGF1	G
Insulin-like growth factor 1 receptor	IGF1R	G
Insulin-like growth factor 2	IGF2	G
Insulin-like growth factor 2 receptor	IGF2R	G
Integrin beta 1	ITGB1	G
Integrin beta 2	ITGB2	G
Integrin beta 3	ITGB3	G
Integrin beta 4	ITGB4	G
Integrin beta 5	ITGB5	G
Integrin beta 6	ITGB6	G
Integrin beta 7	ITGB7	G
Integrin, alpha 1	ITGA1	G
Integrin, alpha 2	ITGA2	G
Integrin, alpha 3	ITGA3	G
Integrin, alpha 4	ITGA4	G
Integrin, alpha 5	ITGA5	G
Integrin, alpha 6	ITGA6	G
Integrin, alpha 7	ITGA7	G
Integrin, alpha 8	ITGA8	G
Integrin, alpha 9	ITGA9	G
Integrin, alpha M	ITGAM	G
Integrin, alpha X	ITGAX	G
Janus kinase 1	JAK1	G
Janus kinase 2	JAK2	G
Janus kinase 3	JAK3	G
Kallman syndrome gene 1	KAL1	G
Kinectin	KTN1	G
Kinesin, heavy chain	KNSL1	G
Kinesin, light chain	KNS2	G
Lamin A/C	LMNA	G
Laminin 5, alpha 3	LAMA3	G
Laminin 5, beta 3	LAMB3	G
Laminin 5, gamma 2	LAMC2	G

Laminin M	LAMM	G
Laminin receptor 1	LAMR1	G
Latent transforming growth factor-beta binding protein 2	LTBP2	G
Leptin	LEP	G
Leptin receptor	LEPR	G
Leukaemia inhibitory factor	LIF	G
Leukaemia inhibitory factor receptor	LIFR	G
LH/choriogonadotropin (CG) receptor	LHCGR	G
LIM homeobox protein 1	LHX1	G
LIM homeobox protein 2	LHX2	G
LIM homeobox protein 3	LHX3	G
LIM homeobox protein 4	LHX4	G
LIM homeobox transcription factor 1, beta	LMX1B	G
Limb girdle muscular dystrophy 1A	LGMD1A	G
Limb girdle muscular dystrophy 1B	LGMD1B	G
Limb girdle muscular dystrophy 2G	LGMD2G	G
Limb girdle muscular dystrophy 2H	LGMD2H	G
Limbic associated membrane protein	LAMP	G
LIM-domain only protein 1	LMO1	G
LIM-domain only protein 2	LMO2	G
LIM-domain only protein 3	LMO3	G
LIM-domain only protein 4	LMO4	G
Lipoma-preferred partner gene	LPP	G
Luteinizing hormone, beta chain	LHB	G
Lymphoid enhancer-binding factor	LEF-1	G
Lysosome-associated membrane protein 1	LAMP1	G
Lysosome-associated membrane protein 2	LAMP2	G
MAD (mothers against decapentaplegic, Drosophila) homologue 2	MADH2	G
MAD (mothers against decapentaplegic, Drosophila) homologue 3	MADH3	G
MAD (mothers against decapentaplegic, Drosophila) homologue 4	MADH4	G
MADS box transcription-enhancer factor 2A	MEF2A	G
MADS box transcription-enhancer factor 2B	MEF2B	G
MADS box transcription-enhancer factor 2C	MEF2C	G
MADS box transcription-enhancer factor 2D	MEF2D	G
MAPK kinase 1	MAPKK1; MEK1	G
MAPK kinase 4	MAPKK4; MEK4;	G
	SERK1	
MAPK kinase 6	MAPKK6; MEK6	G
MAPKK kinase	MAPKKK	G
Matrix Gla protein	MGP	G
MAX-interacting protein 1	MXI1	G
Menin	MEN1	G
Mesoderm-specific transcript	MEST	G
Microphthalmia-associated transcription factor	MITF	G
Midline 1	MID1	G
Mismatch repair gene, PMSL1	PMS1	G

Mismatch repair gene, PMSL2	PMS2	G
Mitogen-activated protein (MAP) kinase	MAPK	G
Motilin	MLN	G
Msh homeobox homolog 1	MSX1	G
Msh homeobox homolog 2 †	MSX2	G
Multidrug resistance associated protein	MRP	G
Mutated in colorectal cancers, MCC	MCC	G
MutL homolog 1	MLH1	G
MutS homolog 2	MSH2	G
MutS homolog 3	MSH3	G
Myelodysplasia syndrome 1 gene	MDS1	G
Myogenic factor 3	MYF3	G
Myogenic factor 4	MYF4	G
Myogenic factor 5	MYF5	G
Na ⁺ , K ⁺ ATPase, alpha	ATP1A1	G
Na ⁺ , K ⁺ ATPase, beta 1	ATP1B1	G
Na ⁺ , K ⁺ ATPase, beta 2	ATP1B2	G
Na ⁺ , K ⁺ ATPase, beta 3	ATP1B3	G
Necdin	NDN	G
Nerve growth factor	NGF	G
Nerve growth factor receptor	NGFR	G
Neural retina-specific gene	NRL	G
Neuregulin	HGL	G
Neurofibromin 1	NF1	G
Neurofibromin 2	NF2	G
Neurotrophic tyrosine kinase receptor 1	NTRK1	G
Neurotrophin 3	NTF3 or NT3	G
Neurturin	NRTN	G
Niacin receptor		G
Nibrin	NBS1	G
Nodal	NODAL	G
Noggin	NOG	G
Norrie disease protein	NDP	G
Notch 1	NOTCH1	G
Notch 2	NOTCH2	G
Notch 3	NOTCH3	G
Notch ligand - jagged 1	JAG1, AGS	G
Nuclear factor of activated T cells (NFAT) complex, cytosolic	NFATC	G
Nuclear factor of activated T cells (NFAT) complex, preexisting component	NFATP	G
Nuclear mitotic apparatus protein 1	NUMA1	G
Oligophrenin-1	OPHN1	G
Oncogene abl1	ABL1	G
Oncogene abl2		G
Oncogene akt1		G
Oncogene akt2	AKT2	G
Oncogene axl	AXL	G
Oncogene bcl2		G
Oncogene bcr/abl		G

Oncogene B-lym		G
Oncogene B-raf		G
Oncogene clk1		G
Oncogene c-myc		G
Oncogene cot		G
Oncogene crk		G
Oncogene crkl		G
Oncogene ect2		G
Oncogene ELK1	ELK1	G
Oncogene ELK2	ELK2	G
Oncogene emis1		G
Oncogene ERB		G
Oncogene ERB2		G
Oncogene ERBA		G
Oncogene ERBAL2		G
Oncogene ERG (early response gene)		G
Oncogene ETS1		G
Oncogene ETS2		G
Oncogene EVI1	EVI1	G
Oncogene fes		G
Oncogene fgr		G
Oncogene fos	FOS	G
Oncogene fps		G
Oncogene GLI1	GLI	G
Oncogene GLI2	GLI2	G
Oncogene GLI3	GLI3	G
Oncogene gro1		G
Oncogene gro2		G
Oncogene Ha-ras	HRAS	G
Oncogene hsl		G
Oncogene hst	FGF4	G
Oncogene int1	WNT1	G
Oncogene int2	FGF3	G
Oncogene int3	Notch4	G
Oncogene int4	WNT3	G
Oncogene jun	JUN	G
Oncogene KIT	KIT, PBT	G
Oncogene LCO	LCO	G
Oncogene l-myc		G
Oncogene lpsa		G
Oncogene lyn		G
Oncogene maf		G
Oncogene mas1		G
Oncogene mcf2		G
Oncogene mdm2	MDM2	G
Oncogene mel		G
Oncogene met	MET	G
Oncogene mos		G
Oncogene mpl		G
Oncogene MUM1	MUM1	G

Oncogene myb	MYB	G
Oncogene myc	MYC	G
Oncogene n-myc		G
Oncogene N-ras (neuroblastoma v-ras)	NRAS	G
Oncogene ovc		G
Oncogene pim1		G
Oncogene pti-1sea		G
Oncogene pvt1		G
Oncogene raf	RAF	G
Oncogene ralb		G
Oncogene rel		G
Oncogene ret	RET	G
Oncogene r-myc		G
Oncogene ros		G
Oncogene R-ras		G
Oncogene sis	PDGFB	G
Oncogene ski		G
Oncogene sno		G
Oncogene spil		G
Oncogene src		G
Oncogene tc21		G
Oncogene TEL	ETV6	G
Oncogene tim		G
Oncogene vavtrk		G
Oncogene v-Ki-ras2	KRAS2	G
Oncogene yes		G
Oncogene yuasa		G
Oncostatin M	OSM	G
Oncostatin M receptor	OSMR	G
Orexin	OX	G
Orexin 1 receptor	OX1R	G
Orexin 2 receptor	OX2R	G
Orthodenticle (Drosophila) homolog 1	OTX1	G
Orthodenticle (Drosophila) homolog 2	OTX2	G
Osteonectin	ON	G
Osteopontin	OPN	G
Osteoprotegerin	OPG	G
p21-activated kinase 3	PAK3	G
Paired box homeotic gene 1	PAX1	G
Paired box homeotic gene 2	PAX2	G
Paired box homeotic gene 3	PAX3	G
Paired box homeotic gene 6	PAX6	G
Paired box homeotic gene 7	PAX7	G
Paired box homeotic gene 8	PAX8	G
Paired-like homeodomain transcription factor 2	PITX2	G
Paired-like homeodomain transcription factor 3	PITX3	G
Parathyroid hormone	PTH	G
Parathyroid hormone receptor	PTHrP	G
Parathyroid hormone related-peptide	PTHrP	G
Parathyroid hormone-like hormone	PTHrP	G

Parvalbumin	PVALB	G
Patched (Drosophila) homolog, PTCH	PTCH	G
Phosphatase & tensin homolog	PTEN	G
Phosphate regulating gene with homologies to endopeptidases on the X chromosome	PHEX	G
Phosphatidylinositol glycan, class A (paroxysmal nocturnal hemoglobinuria)	PIGA	G
Phosphatidylinositol transfer protein	PITPN	G
Phosphodiesterase 1 / nucleotide pyrophosphatase 1	PDNP1	G
Phosphodiesterase 1 / nucleotide pyrophosphatase 2	PDNP2	G
Phosphodiesterase 1 / nucleotide pyrophosphatase 3	PDNP3	G
Phosphomannomutase 1	PMM1	G
Phosphomannomutase 2	PMM2	G
Phytanoyl-CoA hydroxylase	PHYH	G
Platelet derived growth factor	PDGF	G
Platelet derived growth factor receptor	PDGFR	G
Poly(A) binding protein 2	PABP2	G
POU domain, class 1, transcription factor 1 (Pit1)	POU1F1	G
POU domain, class 3, transcription factor 4	POU3F4	G
POU domain, class 4, transcription factor 3	POU4F3	G
Pre-B-cell leukemia transcription factor 1	PBX1	G
Preproglucagon	GCG;GLP1; GLP2	G
Profibrinolysin		G
Progesterone receptor (RU486 binding receptor)	PGR	G
Prohibitin	PHB	G
Prolactin	PRL	G
Prolactin receptor	PRLR	G
Prolactin releasing hormone	PRH	G
Proliferin	PLF	G
Pro-melanin-concentrating hormone	PMCH	G
Promyelocytic leukemia gene	PML	G
Prophet of Pit1	PROP1	G
Prostaglandin (PG) D synthase, hematopoietic	PGDS	E
Prostaglandin isomerase		G
Prostaglandin-endoperoxidase synthase 2	PTGS2	G
Prostate cancer anti-metastasis gene KAI1	KAI1	G
Protein tyrosine phosphatase, non-receptor type 12	PTPN12	G
RAD51, DNA repair protein	RAD51	G
RAD52, DNA repair protein	RAD52	G
RAD54, DNA repair protein	RAD54	G
RAD55, DNA repair protein	RAD55	G
RAD57, DNA repair protein	RAD57	G
Ras-G-protein	RAS	G
Rathke pouch homeobox, RPX	RPX	G
Receptor tyrosine kinase (RTK), Nsk2	NSK2	G
Recombination activating gene 1	RAG1	G
Recombination activating gene 2	RAG2	G
Relaxin H1	RLN1	G
Relaxin H2	RLN2	G
Retinoblastoma 1	RB1	G

Retinoic acid receptor, alpha	RARA	G
Retinoic acid receptor, beta	RARB	G
Retinoic acid receptor, gamma	RARG	G
Retinoid X receptor, alpha	RXRA	G
Retinoid X receptor, beta	RXRB	G
Retinoid X receptor, gamma	RXRG	G
Retinoschisis, X-linked, juvenile	RS	G
Rhabdoid tumors	SMARCB1	G
RIGUI	RIGUI	G
Ryanodine receptor 1, skeletal	RYR1	G
SA homolog	SAH	G
Sal-like 1	SALL1	G
Serine/threonine kinase 11	STK11	G
Serine/threonine kinase 2	STK2	G
Sex determining region Y, SRY	SRY	G
Short stature homeobox	SHOX	G
Sialoprotein, bone	BSP	G
Signal transducer and activator of transcription 1	STAT1	G
Signal transducer and activator of transcription 2	STAT2	G
Signal transducer and activator of transcription 3	STAT3	G
Signal transducer and activator of transcription 4	STAT4	G
Signal transducer and activator of transcription 5	STAT5	G
Sine oculis homeobox, drosophila, homolog 1	SIX1	G
Sine oculis homeobox, drosophila, homolog 2	SIX2	G
Sine oculis homeobox, drosophila, homolog 5	SIX5	G
Slug protein		G
Smoothelin	SMTN	G
Smoothed (Drosophila) homolog	SMOH	G
Somatotrophin		G
Sonic hedgehog, SHH	SHH	G
SOS1 guanine nucleotide exchange factor	SOS1	G
Spastic paraplegia 7	SPG7	G
Sperm adhesion molecule	SPAM1	G
Sperm protamine P1	PRM1	G
Sperm protamine P2	PRM2	G
Split hand/foot malformation gene	DSS1	G
SRY-box 10	SOX10	G
SRY-box 11	SOX11	G
SRY-box 3	SOX3	G
SRY-box 4	SOX4	G
SRY-box 9	SOX9	G
Stem cell factor	SCF	G
Steroid hormone receptor responsive DNA elements		G
Stromal derived factor 1	SDF1	G
Sulfamidase	SGSH	G
Sulfonylurea receptor	SUR	G
Suppression of tumorigenicity 3 gene	ST3	G
Suppression of tumorigenicity 8 gene	ST8	G
Surfeit 1	SURF1	G
Syndecan 1	SYND1	G

Syndecan 2	SYND2	G
Syndecan 3	SYND3	G
Syndecan 4	SYND4	G
Synovial sarcoma gene 1	SSX1	G
Synovial sarcoma gene 2	SSX2	G
Talin	TLN	G
TATA binding protein	TBP	G
TATA binding protein associated factor 2A	TAF2A	G
TATA binding protein associated factor 2C2	TAF2C2	G
TATA binding protein associated factor 2D	TAF2E	G
TATA binding protein associated factor 2F	TAF2F	G
TATA binding protein associated factor 2H	TAF2H	G
TATA binding protein associated factor 2I	TAF2I	G
TATA binding protein associated factor 2J	TAF2J	G
TATA binding protein associated factor 2K	TAF2K	G
T-BOX 1	TBX1	G
T-BOX 2	TBX2	G
T-BOX 3	TBX3	G
T-BOX 4	TBX4	G
T-BOX 5	TBX5	G
T-BOX 6	TBX6	G
Testis-specific protein Y	TSPY	G
Thrombopoietin	THPO	G
Thrombospondin	THBS1	G
Thymopoietin	TMPO	G
Thyroglobulin	TG	G
Thyroid hormone receptor, alpha	THRA	G
Thyroid hormone receptor, beta	THRB	G
Thyroid peroxidase	TPO	G
Thyroid receptor auxiliary protein	TRAP	G
Thyroid-stimulating hormone receptor	TSHR	G
Thyroid-stimulating hormone, alpha	TSHA	G
Thyroid-stimulating hormone, beta	TSHB	G
Thyrotroph embryonic factor	TEF	G
Thyrotropin releasing hormone	TRH	G
Thyrotropin releasing hormone receptor	TRHR	G
TIE receptor tyrosine kinase	TIE-1	G
Torticollis, keloids, cryptorchidism and renal dysplasia gene	TKCR	G
Transcription factor 1, hepatic	TCF1	G
Transcription factor 2, hepatic	TCF2	G
Transcription factor 3	TCF3	G
Transcription factor binding to IGHM enhancer 3	TFE3	G
Transcription termination factor, RNA polymerase 1	TTF1	G
Transcription termination factor, RNA polymerase 2	TTF2	G
Transcription termination factor, RNA polymerase 3	TTF3	G
Transferrin	TF	G

Transferrin receptor	TFRC	G
Transforming growth factor, alpha	TGFA	G
Transforming growth factor, beta 2	TGFB2	G
Transforming growth factor, beta induced	TGFBI	G
Transforming growth factor; beta receptor 2	TGFBR2	G
Transglutaminase 1	TGM1	G
Transglutaminase 2	TGM2	G
Transglutaminase 4	TGM4	G
Translocation in renal carcinoma on chromosome 8 gene	TRC8	G
Treacle gene	TCOF1	G
Tubby-like protein 1	TULP1	G
Tuberous sclerosis 1	TSC1	G
Tuberous sclerosis 2	TSC2	G
Tumor susceptibility gene 101	TSG101	G
Tumour protein p53	TP53, P53	G
Tumour protein p63	TP63	G
Tumour protein p73	TP73	G
Tumour protein, translationally-controlled 1	TPT1	G
Twist (Drosophila) homolog	TWIST	G
Ubiquitin		G
Ubiquitin B	UBB	G
Ubiquitin C	UBC	G
Ubiquitin carboxyl-terminal esterase L1	UCHL1	G
Ubiquitin fusion degeneration 1-like	UFDIL	G
Vascular endothelial growth factor	VEGF	G
Vasoinhibitory peptide		G
Vitamin B12-binding (R) protein		G
Vitamin D receptor	VDR	G
v-myc avian myelocytomatosis viral oncogene homolog	MYC	G
Von Hippel-Lindau gene	VHL	G
Werner syndrome helicase	WRN	G
Wilms tumour gene 1	WT1	G
Wilms tumour gene 2	WT2	G
Wilms tumour gene 4	WT4	G
Winged helix nude	WHN	G
Wingless family, wnt2	WNT2	G
Wingless family, wnt4	WNT4	G
Wingless family, wnt5	WNT5	G
Wingless family, wnt7	WNT7	G
Wingless family, wnt8	WNT8	G
Wnt inhibitory factor, WIF-1	WIF1	G
Wolf-Hirschhorn syndrome candidate 1 gene	WHSC1	G
X (inactive)-specific transcript	XIST	G
X-ray repair gene	XRCC9	G
YY1 transcription factor	YY1	G
Zona pellucida glycoprotein 1	ZP1	G
Zona pellucida glycoprotein 2	ZP2	G
Zona pellucida glycoprotein 3	ZP3	G

Zona pellucida receptor tyrosine kinase
Zonadhesin

ZRK
ZAN

G
G

2. A set of probes, said probes being antibodies or antibody fragments which interact with specific expressed proteins encoded by gene sequences of a group of genes, said probes being for detecting relevant variants (mutations and polymorphisms), e.g. nucleotide substitutions (missense, nonsense, splicing and regulatory), small deletions, small insertions, small insertion deletions, gross insertions, gross deletions, duplications, complex rearrangements and repeat variations in a target group of genes; characterised in that said group is a core group of genes consisting of substantially all of the genes defined in claim 1.
3. A set according to claim 1 or 2 in which a minority of said probes for listed genes are absent.
4. A set according to claim 1 or 2 in which a limited number of additional probes are present together with substantially all of the probes for the listed genes.
5. A set according to claim 1 or 2 in which a limited number of probes are replaced by probes for non-listed genes.
6. A set of probes for a core group of genes according to any of claims 1 to 5 in which each gene to be probed is substantially similar (greater than 85% homologous) in sequence to the respective member of the core list of genes.
7. A set according to any of claims 1 to 6 consisting of probes for members of a sub-group of the core group.
8. A set according to any preceding claim in which said probes are in the form of an array and are spatially arranged at known locations on a substrate.
9. A set according to any preceding claim wherein said probes are on a substrate which forms part of or consists of one or more chip plate(s), for use in a chip assay for detection of said gene variants.
10. A set according to any preceding claim in which said probes are mass, electrostatic or fluorescence tagged probes.
11. A set according to claim 8 or 9 in which said substrate is a semiconductor microchip.
12. A set according to any preceding claim for use in a biological assay for detection of said gene variants.
13. A set according to any preceding claim for use in the measurement of differential gene expression levels.
14. A medical device including a set according to any preceding claim for use in an assay for detection of said gene variants.
15. A medical device including a set according to any of claims 1 to 13 for use in an array for detection of differential gene expression levels.
16. A method for use in assessing the genomic profile of a patient or individual, the method comprising testing for and detecting the presence or absence of DNA or RNA encoding the relevant structural variants (as defined in claim 1) in a target group of genes by hybridising a nucleic acid-containing sample from said patient or individual to a set according to any of claims 1 and 3 to 13 and relating the probe hybridisation pattern to said variations.

30. A method according to any of claims 16, 17, 28 and 29 wherein at least one step is computer-controlled.
31. An assay suitable for use in a method according to any of claims 16, 17, 28 and 29; said assay comprising means for determining the presence or absence of relevant polymorphic variants of the core group of genes as defined in any of claims 1 to 7 in a biological sample.
32. A formatted assay technique (kit) for use in assessing the risk of a patient or individual developing symptoms; said kit comprising:
 - i) means for testing for the presence or absence of DNA or RNA encoding relevant polymorphic variants of the core group of genes as defined in claim 1 or 3 to 7 in a sample of human DNA;
 - ii) reagents for use in the detection process
 - iii) readout indicating the probability of a patient or individual developing symptoms.
33. A formatted assay technique (kit) for use in assessing the risk of a patient or individual developing symptoms; said kit comprising:
 - i) means for testing for the presence or absence of proteins encoded by the core group of genes and/or relevant polymorphic variants of the core group of genes as defined in any of claims 2 to 7 in an expressed-protein-containing human sample;
 - ii) reagents for use in the detection process
 - iii) readout indicating the probability of a patient or individual developing symptoms.
34. A set of probes according to claim 1, wherein the probes are selected from the group consisting of oligonucleotides and polynucleotides.

1/2
SCHIZOPHRENIA

Nonadherence is common, especially if patients do not collaborate in their choice of treatment

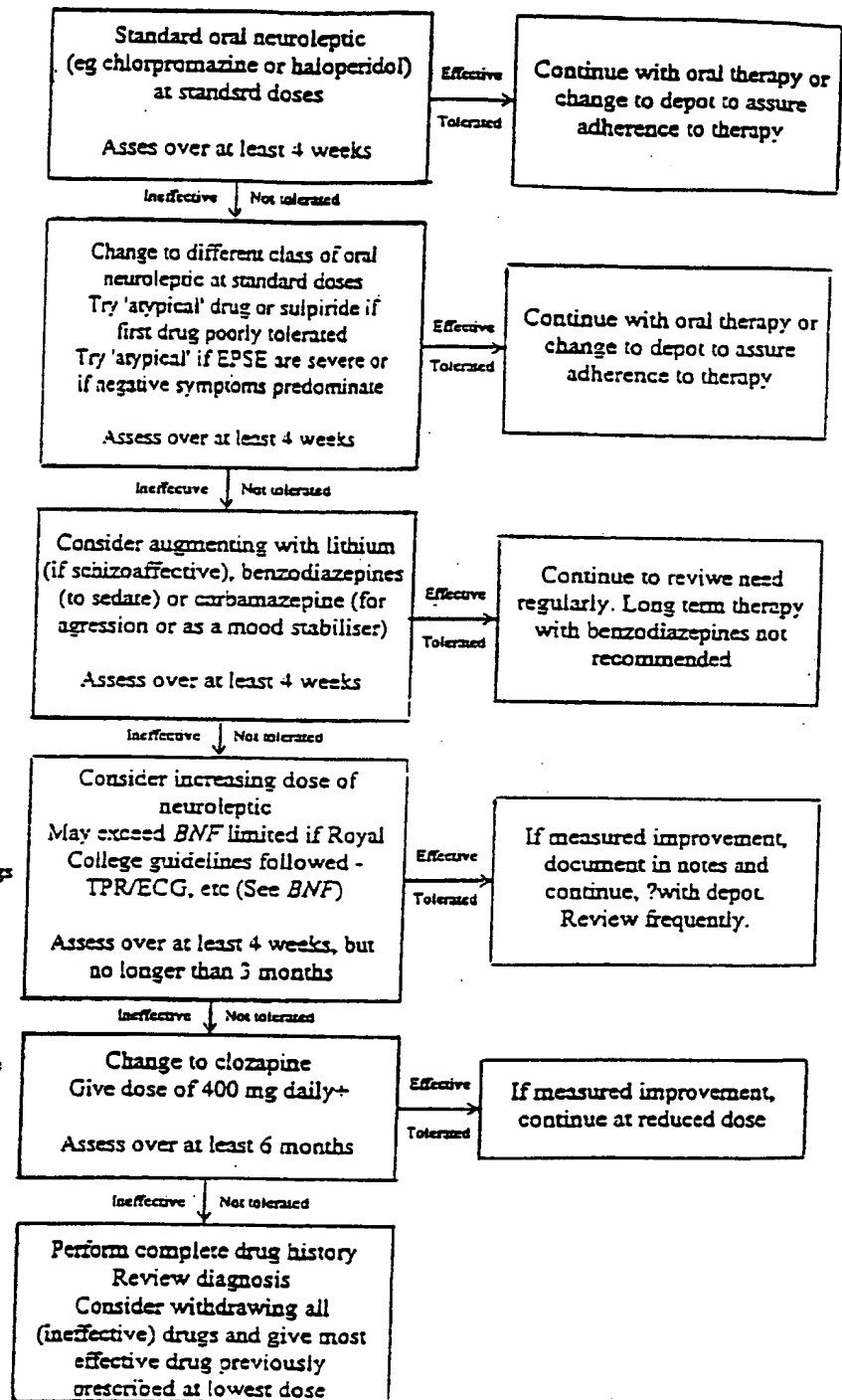
Assess efficiency and tolerance with recognised rating scales, eg BPRS, PANSS, EPRS, LUNBERS

Avoid neuroleptic polypharmacy - oral - depot are rarely necessary

Consider early use of short term clonazepam if sedation is required in acute psychosis

Few data to support the use of high-dose neuroleptics. Do not exceed recommended dose for 'atypical' drugs

Some support for the use of clozapine plasma levels - aim for a pre-dose level of 350 mcg per litre



DEPRESSION

